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ond-class matter.]

BALTIMORE, MAY 17, 1906.

AT WASHINGTON.

I said in my haste, All men are liars.

SOUTHERN BREADSTUFF EXPORTS.

Advance figures of the values of the exports of breadstuffs, cattle, hogs and sheep, provisions, cotton and mineral oils during the ten months of the present fiscal year show a total of \$786,918,070, an increase of \$145,820,719 over the same period of the preceding fiscal year. Of the total increase, \$72,907,282, or nearly a half, was the increase in the value of breadstuff exports, and the most marked of that increase was at Southern ports, as shown by the following table:

Ports.	1905.	1906.
Baltimore.	\$8,461,346	\$22,303,195
Newport News.	3,961,765	9,292,537
Norfolk and Portsmouth.	557,106	1,695,006
Galveston.	2,839,822	10,933,278
Mobile.	2,196,158	2,466,118
New Orleans.	10,277,480	16,554,039
Total.	\$28,274,677	\$63,144,173
All ports.	\$6,510,466	\$19,417,748

The increase at these six Southern ports was from \$28,274,677 to \$63,144,173, equal to \$34,869,496, or 123 per cent., while at all other leading ports the increase was from \$58,235,789 to \$96,273,575, equal to \$38,037,786, or only 65 per cent.

Mr. S. A. Hughes, general immigration agent of the St. Louis & San Francisco Railroad Co., in a letter to the MANUFACTURERS' RECORD says:

I believe, as you do, that the South offers many advantages to the homeseeker and investor, and while its development in the past few years has been really wonderful, I am of the opinion that the same is but in its infancy, and I predict that the next few

years will see such advancement in the South as will startle the commercial world.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 69, 70 and 71.

CONSERVATISM'S SIGNAL, CHANCE.

Manifestations at Washington, in Congress and out of Congress, during the past week, distressing as they have been to the great mass of the American people who appreciate the ever-pressing necessity for an orderly administration of public affairs, may, nevertheless, be turned to good account if American conservatism but seizes the signal chance thus given to drive a much-needed lesson home to the intelligence of citizens. Without respect of persons, and without reference to the merits or the demerits of the question involved, legislation affecting railroad interests directly and indirectly the personal liberties of every American citizen, thinking men with no personal ambition or with no personal vanity to gratify or with no unreasoning assumption to maintain recognize in the manifestations only a regrettable though natural outcome of recent tendencies in national government, novel, if, indeed, not revolutionary. It is for the conservative elements of the country to sink party affiliations and personal predilections in the sense of duty to overcome such tendencies lest they reach their disastrous end.

In the form of government framed for this country when it was but a people of three million or four million was embodied the principle of a balancing and partitioning of powers among the great departments, the legislative, the administrative and the judicial, the wisdom of which has been demonstrated by more than a century of achievement in spite of notable mistakes, really emphasizing by contrast the general truth, and the necessity for which has steadily increased with the growth of population. Errors of youth are corrigible and are serviceable as warnings for age. Maturity cannot afford to experiment with danger in the face of definite experience. In the case of a people practically homogeneous and occupying a comparatively narrow territory in an age of simple life, mistakes are not as baneful or as far-reaching as in the case of a continental nation in an age of rapid expansion on all lines, with its millions of population made up of heterogeneous elements unlearned in great measure in the theories of safe and stable government, but trained to act upon impulse in ignorance that safeguards for the individual are assured only by respect for the fundamental law of the land.

The greatest mistake that can possibly be made at this time in the United States is to supplant long-tested and well-tried constitutional govern-

ment with personal rule. The surest means to such an end lurk in the sad confusion as to the rights and duties of co-ordinate branches of the government which has of late prevailed, and among the most certain ends of this straying from the guarantees of stability and safety are the personalities in high places with which the American people are becoming more and more surfeited. Men who yield constitutional rights are as much at fault as those who consciously or subconsciously assume prerogatives warranted neither by constitution nor by common sense. Conservatism must impress upon both classes of errands that persistence in their vagaries shall not be permitted. The opportunity to do this will be given at the polls in congressional elections next fall. The message to the other branches of the government can be sent through the members of the House of Representatives then to be chosen under the influence of a properly and vigorously-conducted educational campaign in which quite a number of the members of the House of Representatives stand in as much need as several hundred thousand voters. The texts of the campaign should be:

All legislative powers shall be vested in a Congress of the United States which shall consist of a Senate and House of Representatives. The executive power shall be vested in a President. The judicial power shall be vested in one supreme court and in such inferior courts as the Congress may from time to time ordain and establish.

Neither the Constitution nor custom, sometimes of greater force than law, justifies an impairment by one branch of the government of the power of any other branch, and any inclination to that end is a direct menace to the peace and prosperity of the country dependent upon orderly government. The Constitution provides for the punishment of persistence in such an inclination.

That deliberate or unintended attempts upon the integrity of Constitutional government are made boldly and openly and freely allowed by men whose duty it is to resist is no excuse for them, and accentuates the necessity for the law-abiding to insist upon respect for law by lawmakers and lawgivers.

Appeals to one phase of the mob mind, even in furtherance of a worthy cause, merely intensify the mob mind and make it necessary to appeal to it on every occasion. But democracy is not mobocracy.

The Constitution recognizes no government by telephone.

Candidates for Congress next fall should be compelled by their constituents to elaborate straightforward, unmistakable views based upon such texts, and their safety and sanity and their consequent right to election to public office should be determined by the character of their views.

The present emergency neglected,

conservatism may never again have a chance to exert itself.

HIC JACET?

[From the MANUFACTURERS' RECORD, March 1, 1906.]

Once upon a time a spider was so tangled in the many webs that it had spun for the purpose of attracting different kinds of flies to its support that it was threatened with self-strangulation. Shortwinded, it could not sing the well-known arachnid ditty, "Will you walk into my parlor, etc." But it was a resourceful spider, and in its stress resorted to the device of disguising itself as one of the fleet of flies. The effect was instantaneous. Real flies that had gone by on the other side from the iridescence of the normal webs tumbled over one another in samaritan zeal to be tangled in the spider's mesh. And the spider smiled a continent-embracing smile.

The which parable is suggested by the avidity with which a so-called Democratic representative in the Senate of the United States grabbed the hot end of a legislative poker that had been passed up from the House of Representatives through the act of other so-called Democratic representatives. When the Senate interstate commerce committee selected last Friday Benjamin R. Tillman of South Carolina to take charge of a device called the Hepburn railroad-rate bill, his Satanic majesty, in spite of his superheated surroundings, must have been chilled to the heart with envy that he, greatest of all hoodwinkers, was not even permitted to instigate the greatest bit of hoodwinking of the age.

To think of Bluff Ben becoming bluffed Ben and being led into the thicket instead of to the throne!

At the turn of the trick Senators Aldrich, Elkins, Foraker, Crane and Kean, opponents of the Hepburn measure, were reported as seeing that "the game was up." That is a baseless reflection upon the political, not to say sporting, acumen of those gentlemen. For as a matter of fact, the game, which up to that moment had been largely a case of bluff, really only began upon a cold poker basis. Unless the House is pulled in the meantime, the game can have but one ending.

For 10 years or more a political organization calling itself the National Democratic party has, from one cause and another, been rapidly disintegrating, and its fragments have attached themselves to almost any ephemeral project which the wind has wafted in their direction, with the result that at least 4,000,000 democrats neglected to go to the polls at the last presidential election. Among the projects which representatives of these fragments have been induced to cherish is the Hepburn railroad-rate bill, a measure as far removed from any principle of democracy, and, indeed, from any principle of safe and sane government as is the East removed from the West. Confessedly imperfect, liable, if passed, to be thrown out of court at the first test, it can only result

in demoralization of the material interests of the country, while strengthening the tendency to depart farther and farther from the safeguards of stable government. The fragments of the organization, which was once a great party, will be obliged to shoulder the odium which must surely follow that demoralization as soon as the eyes of the American people have been opened by experience. These fragments, gathered together for the last time in support of the Hepburn measure, will consequently find themselves in a hole so deep and so overwhelmingly filled with their blindly-assumed burden that even a Gabriel's trump will not be able to call to life anything bearing the name Democratic.

The non-partisan measure will be discovered to be the greatest automatic political undertaker of the day.

There will be no flowers on that grave. All available blooms will be bound in the bouquets tossed to the slickest politician and staunchest party man that the country has ever produced.

NEW BANKS IN THE SOUTH.

Reports received by the MANUFACTURERS' RECORD from January 1 to May 1 show that during the first four months of the current year there were chartered or incorporated in the South 230 banks and trust companies with a total authorized capital of \$10,026,500. Of this number 153 are State banks with \$5,062,000 capital, 54 are national banks with \$2,510,000 capital and 23 are trust companies with \$2,454,500 capital. Including Indian Territory, Oklahoma and Missouri, there is a total of 283 banks and trust companies with a total authorized capital of \$12,294,000, including 180 State banks with \$5,479,500 capital, 75 national banks with \$3,110,000 capital and 28 trust companies with \$3,704,500 capital.

Texas leads the list of States with the largest number of charters and incorporations and the greatest total capital. In that State there are 38 State banks, 34 national banks and one trust company chartered with a total authorized capital of \$2,430,000. Of the State banks with \$980,000 capital 18 have capital of only \$10,000 each, but one has the capital of \$100,000 and there are several of \$50,000 capital each, besides one of \$75,000 and several more of \$25,000 capital. Most of the national banks—their total capital being \$1,150,000—are of the \$25,000 class, but there are two of the \$100,000 size and several of \$50,000. The capital of the one trust company is \$300,000. Georgia comes next in the number of charters and incorporations with a total of 34, including 31 State banks with \$1,340,000 capital, one national bank with \$25,000 capital and two trust companies of \$100,000 capital each, the total capital in that State for these 34 institutions being \$1,565,000. The State banks include two of \$200,000 capital each, one of \$100,000 capital, four of \$50,000 capital, while nearly all the rest are of the \$25,000 class. Oklahoma is third in number of new charters, having 26, including 16 State banks with a total capital of \$160,000 and 10 national banks with a total capital of \$250,000. All the national banks are of the \$25,000 class, while the State banks are all \$10,000 each, the disposition in that Territory being apparently to have national banks whenever the amount of capital subscribed is sufficient to warrant them. North Carolina is next in the number of new charters and incorporations, having 20 with a total capitalization of \$880,000, including 13 State banks with

\$390,000 capital, including one of \$100,000 and three of \$50,000, besides three national banks with \$140,000 capital and four trust companies with \$350,000, three of the latter having \$100,000 capital each. Indian Territory is fifth in order with 19 charters, the total capital being only \$492,500, including 11 national banks with \$350,000 capital, one institution having a capitalization of \$100,000, besides six State banks with \$92,500 capital and two trust companies with \$50,000 capital. Alabama and South Carolina each report 17 charters, the former with \$495,000 capital and the latter with \$494,500 capital. There are 10 new State banks in Alabama with \$335,000 capital, four national banks with \$100,000 capital and three trust companies with \$60,000 capital. In South Carolina there are 13 State banks with \$340,000 capital, one national bank with \$100,000 capital and three trust companies with a capital of \$54,500.

Virginia reports 11 new charters with \$835,000 total capital, including seven State banks with \$195,000 and four national banks with \$640,000, three of the latter being \$200,000 institutions. Maryland has 10 charters with \$475,000 capital or more, including six State banks with a total capital of \$150,000 and four trust companies with a total capital of upwards of \$325,000. Mississippi also has 10 new charters, their total capital being \$345,000, in which nine State banks are represented with a total capital of \$245,000, the balance being made up by one trust company with \$100,000 capital. West Virginia also has 10 new charters, their total capital being \$380,000, including five State banks with \$150,000 capital and five national banks with \$230,000 capital. Arkansas reports nine charters with a total of \$716,000 capital, including eight State banks with \$216,000 and one trust company of \$500,000. Missouri, while her total of new charters is not large, their total capitalization is comparatively great. Her new institutions are only eight in number, but their capital aggregates \$1,365,000. This includes five State banks with \$165,000 capital and three trust companies with \$1,200,000 capital, one of the latter being a \$1,000,000 organization. Louisiana and Tennessee each report seven new charters, the former with a total capital of \$890,000, including five State banks with \$390,000 capital and two trust companies with \$500,000 capital, one of these having a capitalization of \$400,000, while the latter reports a total capitalization of \$241,000, including five State banks with \$191,000 capital, one national bank and one trust company. Kentucky's new charters number only four, with a total capital of \$240,000. This includes three State banks of \$140,000 capital, including one of \$100,000, and one national bank of \$100,000 capital. Florida reports the incorporation of one trust company with \$40,000 capital.

This review of new banks in the South does not include the organization of banks previously chartered or the opening of banks, but simply notes those for which charters have been granted, so as to make clear the recent additions to the banking facilities of this section of the country. A great many banks which were incorporated before the 1st of January have organized during the last three or four months and have prepared to begin business, while others have actually opened and still others are organizing preparatory to making application for charters or incorporation. The demand for banking facilities throughout the South appears to be undiminished, and it is probable that new

charters will continue to be reported during the next several months in about the same ratio as is here shown for the first part of the year.

SOUTHERN MEN OF WEALTH.

Reviewing the wonderful progress made by Richmond, Va., since the wreck of 1865, the *Times-Dispatch* of that city says that there are in Richmond two citizens worth from \$5,000,000 to \$10,000,000, four worth from \$1,000,000 to \$5,000,000, five worth from \$1,000,000 to \$2,000,000, six worth from \$750,000 to \$1,000,000, 15 worth from \$250,000 to \$500,000, 40 worth from \$200,000 to \$500,000 and 70 worth from \$100,000 to \$200,000, the 1906 assessment of personal property being likely to show about \$40,000,000. With very few exceptions these men of wealth are Southerners who have made their money in Richmond since the war. These are interesting facts, but not more interesting than the fact that other fortunes equally as great may still be made in Richmond, as well as in many another Southern city. For the most part, Southern men of wealth have succeeded against tremendous odds, hard to be realized by anyone who had not been through the battle. But these pioneers have really only brought the South to the beginning of its development, in which all of its cities should have a share. The pioneers have wrought great work in demonstrating what Southern men may do with their own resources, but those resources for manufacturing, agriculture and commerce are in large part still to be thoroughly handled. The prospect is enough to induce Southern men who left the South to make their fortunes to return and cast in their lot with the stay-at-homes, and join with them in seeing to it that in all respects the South shall keep pace with its material progress.

THE CALL FOR WORKMEN.

J. Frederick Houston & Co., manufacturers of cotton yarns, Cumberland, N. C., writes to the MANUFACTURERS' RECORD as follows:

We wish to express our gratification at the manner in which you have put the resources of the South before the public. In line with the opinion we wrote you as to the needs of the South on the labor question, we only wish you would agitate this question sufficiently to get the people who require the labor to co-operate with each other in influencing immigration to our section of the country. We feel that our climate and pursuits would particularly appeal to the people of Southern Europe, and that if a few immigrants were once settled in the South, their influence would result in bringing many more. The wants as to labor are not confined to any one class of manufacturing or to any State in the South.

This is but a specimen of expressions of opinion as to the need of labor coming from all parts of the South. It is so pressing that prominent turpentine men are considering the calling of a convention of operators in Georgia, Florida and the Carolinas to devise some means whereby the necessary help for harvesting the product this season may be obtained. Railroad companies engaged in construction work, especially in the Southeast, are hard put to get and keep a sufficient force of workmen, and representatives in Chicago of Texas railroads are grasping at every opportunity to make up a deficiency of 200,000 laborers for that State. In Tennessee, where much building is under way, carpenters and other mechanics are at a premium, and one manufacturing establishment in South Carolina, for in-

stance, could give permanent employment to a thousand persons.

Meanwhile steps are being taken in many parts of the South to make use of foreign labor, either that which has already been in this country some time or that freshly arriving. And in this connection plans for establishing direct immigration to Southern ports are being speeded. The opinion is growing that dependence can no longer be had upon the negro in many lines of work which the negro has long monopolized and hampered, and that the only relief is to be had in immigration.

Messrs. Kirkpatrick & Johnson, civil and mechanical engineers, Jackson, Miss., write to the MANUFACTURERS' RECORD:

We like the MANUFACTURERS' RECORD because it covers so well the field in the South and because it never has the blues.

The Northern Electrical Manufacturing Co., Madison, Wis., in a letter to the MANUFACTURERS' RECORD says:

We might advise you that it is our custom to follow all propositions reported in your daily issue. We have found many excellent opportunities for business in the South reported in your *Daily Bulletin*.

PROMPT RETURNS.

Mr. W. H. Crawford, president Kentucky-Tennessee Tobacco Co., Nashville, Tenn., writes to the MANUFACTURERS' RECORD as follows:

"Through an advertisement in the MANUFACTURERS' RECORD recently for a boiler and engine we had a great many communications from all over the country. Among them was one from John P. Dale of Nashville, Tenn., who answered the advertisement and sold us one 60-horse-power economic boiler, one 30-horse-power engine and a 60-horse-power feed-water heater pump and injector, a complete first-class modern plant on prompt delivery; machinery made by the Erie Works, Erie, Pa."

THE COTTON MOVEMENT.

In his report for May 11 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 253 days of the present season was 10,078,907 bales, a decrease under the same period last year of 1,730,158 bales; the exports were 5,739,961 bales, a decrease of 1,493,088 bales; the takings were, by Northern spinners, 2,101,718 bales, an increase of 114,684; by Southern spinners, 1,801,406 bales, an increase of 66,957 bales.

CORRECTION.

In its issue of May 3 a correspondent of the MANUFACTURERS' RECORD stated that the plant of the Prairie Pebble Phosphate Co. at Mulberry, Fla., was erected and put into successful operation by Constructing Engineer Memminger. The Prairie Pebble Phosphate Co. informs the MANUFACTURERS' RECORD that the construction of the plant throughout was personally engineered and supervised by its president, Mr. Joseph Hull of Savannah, Ga.

TO ADVANCE SELMA.

Through Mr. F. M. Abbott, president of the street-railway system, and Mr. E. C. Jones, 100 acres of land situated along the Southern Railway and the Louisville & Nashville Railroad at Selma, Ala., have been given to the Selma Commercial and Industrial Association in furtherance of that body's progressive work for the development of the city. It is proposed to offer this land as free sites for manufacturing plants as an inducement for them to locate at Selma.

Interstate Cottonseed Crushers at Atlanta.

[Special Dispatch to Manufacturers' Record.]

Atlanta, Ga., May 16.

The tenth annual convention of the Interstate Cottonseed Crushers' Association held its opening session yesterday in the Georgia Building of the Piedmont Exposition Grounds. There was an attendance of 425 members, 100 of latter representing new membership enrolled today. In addition, the local cotton-oil and allied interests were also well represented, and to an extent that the Atlanta cotton-oil market was practically at a standstill. L. A. Ransom of Atlanta called the convention to order, and after speeches of welcome had been delivered by Governor Joseph M. Terrell of Georgia and Mayor Woodward of Atlanta, the business of the convention was on. The rules governing transactions in cottonseed and products as adopted by the last convention held in New Orleans a year ago, as revised and amended by the committee on rules in session in Atlanta since May 12, were adopted. The question of prime meal containing by analysis not less than 8 per cent. of ammonia for Texas, 7 per cent. for North Carolina and 7½ per cent. for the remaining seed-crushing States consumed considerable time in discussion. It was finally agreed that a committee of three, who were appointed by President J. C. Hamilton of the association, should decide what proportion of ammonia should be fixed for each of the territories named. Several important changes in the rules have been made and the entire code simplified, the trend being in favor of the crude mills.

President Hamilton's Suggestions.

In his annual address President J. C. Hamilton of Baton Rouge, La., said:

"While we have cause to feel very much encouraged by our large and growing membership and interest, we should not indulge in too much self-congratulation until our number has reached, approximately, every crude mill, refinery and allied interest. Then, and not until then, can we hope to attain that measure of success of which this association is capable. Instead of wearying you with a long statistical address, embodying reports of the various committees, I have thought best to let each committee make its own report to the association at some time during the session, thus impressing upon some that each member of each committee has assumed a responsibility in accepting an appointment and should give an account of his stewardship.

"The governing committee of each State and Territory should make a report, with suggestions if deemed advisable. The committee on rules has, as usual, met three days in advance of the convention, after widely advertising for suggestions as to improvements and amendments to our present rules by those who think such are needed. It is no easy matter to formulate rules to govern and regulate all transactions among interests at times antagonistic and opposed to each other, but this committee on rules was selected with the idea that it best represented the various interests, and the result of its earnest deliberations should receive your most thoughtful and careful attention. Bear in mind that no rules are good or can be maintained which are not fair rules, and furthermore, if you will study and understand them and are fair yourself you will have little trouble or disappointments in your season's business trading under them. The rules of this association only apply on trades made by and between its members. To help strengthen and upbuild our association members should incorporate in

their contracts that any differences must be settled under the rules of this association, and not under the rules of any business exchanges. Stand by your association first and always, and soon every crusher and buyer will see the necessity for becoming a member.

"The legislative committee made a trip to Washington, learning what was necessary to be done and accomplishing other good results. A special committee was sent to Washington to confer with Secretaries Metcalf and Wilson and with senators and representatives regarding bills pending for the exploitation of foreign markets for cotton and cottonseed products. About the duty on press cloth the committee, after interviews with Secretary Shaw and American manufacturers, as agreed, have made an importation of press cloth for a test case, and we hope to have an early decision finally settling what rate of duty is applicable. Under the present construction or classification of press cloth under the tariff laws, the American manufacturers can advance their price to \$1 per pound, whereas press cloth can be imported for less than 45 cents, duty unpaid, or, including the duty intended by the tariff of 1897, for about 50 cents per pound. I am impressed with the importance of the legislative committee, and feel that when our association has reached that degree of strength in numbers that we can now confidently hope for, this committee's power for good to the association will be far beyond the present expectations of most of our members. Adverse criticism has been made of the power and authority delegated to this apparently limitless committee, and to this I direct your careful consideration, hoping that in your wisdom and foresight some means may be found to overcome any reasonable objection thereto. This committee should be composed of alert, progressive, well-balanced men, who will give it the attention the association expects and deserves, and the results will soon be manifest to all.

"The bureau of publicity, the dues to which caused so much dissatisfaction that your executive committee deemed it advisable to suspend their collection during the past season, is one of the most progressive steps ever taken by this association, and should be maintained. Without adequate funds the bureau of publicity could do but little of what was contemplated by its conscientious and conservative members for this pioneer work. To carry out this most excellent idea of education of our own members and their territories immediately around their mills ample funds are necessary, and this should have your most careful thought and consideration. I think the annual dues should remain at \$10, because there are many shortsighted people, each having his influence, who need encouragement to even make this expenditure for its privileges, and the association needs a large membership. On the other hand, to raise the money necessary to educate such members and their trades to the proper appreciation of the values of our finished products, in which all share alike, is a subject requiring rare tact and judgment. It is unfair that comparatively a few should continue to spend so much of their time and an undue proportion of their means for the general good, in which all can and do share alike. Would that we had more of these unselfish, progressive men, financially able to carry out the modest idea of our conservative bureau of publicity. The field is unlimited. First educate yourself to its importance, remembering that anything worth striving for costs something, or, in the parlance of the day, 'all good things come high,' and

the necessary funds will be forthcoming.

"Another important matter from which you can all more readily, perhaps, see a quick return is mutual insurance. This subject will be presented for your further consideration by Mr. I. Jalonick of Dallas, Texas, who has already made a most successful and satisfactory beginning. This should receive every encouragement and advancement at your hands. In this connection and from my own experience this association and its members should insist that in the settlement of insurance losses on stock the market value at the time of fire, as ascertained by the market quotations at recognized centers, should be taken, as in the case with grain and cotton, and not what it cost the manufacturer, thus leaving endless opportunity for a wrangle and loss of time in making settlement. As the demand for all cottonseed products has reached that stage where future contracts are traded in, and all products can be disposed of by immediate or future contracts at market quotations any day, it is manifestly unnecessary and unfair to class our products in a group with those requiring time and expense to market, and not, perhaps, readily salable any day on quotations. While insurance solicitors will say this method and rule prevail, and is the custom in making settlements based on the wording of the policy, the fact is it is not followed, and the only way to insure this is to have it so specified in plain words, capable of but one construction, signed by the company.

"Notwithstanding it has been known for months by mill men that the crop of 1905 was comparatively short and the production of cottonseed oil during the past season the smallest since 1901, no substantial benefit was gained by the mills, nor do they seem to have been influenced thereby, but as a rule followed the same old custom of crowding a year's supply of oil upon the trade in comparatively a few crushing months. The price of linters, too, has been abnormally low during the past season. We should take some intelligent action to improve these conditions and get for our products their full actual values. The aid of our consular service is to be had for the asking, and no doubt with proper encouragement we can secure the full and hearty co-operation of the Bureau of Commerce and Labor to the benefit of our industry.

"Personal experience of your president convinces him that as a whole we are not sufficiently informed about our own industry, and in consequence the outside world knows less. First, we must be thoroughly posted ourselves, and second, we should provide the necessary funds to permit those capable of doing it to advertise and educate our home trade to a partial appreciation of the immense values they are permitting to be exported on which they should reap handsome profits."

Publicity.

The subject of mutual interinsurance among cottonseed-oil mills was interestingly discussed by J. Jalonick. The report of the publicity bureau, of which L. A. Ransom is chairman, Joe W. Allison and B. T. Taylor being members of the committee, says in part:

"One-third of our product is exported, amounting to over \$30,000,000 annually. If we continue to export, we should thoroughly understand the conditions prevailing in foreign markets using these products in order to get full value for them. When our oil sells at approximately its value it is more often the result of speculation than because a legitimate market has been created. We have increased the production from 500,000 barrels 15 years ago to over 3,000,000 barrels for the past season, and it has all been consumed. This is the highest evidence of its value to the

consumer, and yet we have seen it sell at times for lower prices the present season than it did 15 years ago. The production of corn and wheat has almost doubled, and the production of lard has been increased considerably during the same period, and all have sold at higher prices than in 1890. Is there any more reason for an advance in the price of these commodities with greatly-increased production than there is for cotton oil under the same conditions except our own indifference? Cotton oil is far better suited to our climate than any animal fat. If this fact was well known, better prices would be obtained for it, because its use would be greatly increased; at the same retail price of lard per pound a gallon of oil would sell for 75 cents. Allowing a reasonable amount to cover the cost of refining, packages, handling and other expenses, if the oil was sold at its value at comparison with butter, lard, etc., the mills would realize double the average price they now get for it. This would not only benefit the mills, but would improve the entire agricultural interest of the South as well.

"Why should the South export one-third of the cake and meal it produces? Every pound of it is needed and should be consumed here for stock feed, and if it was done, it would greatly enhance its value and make this the great cattle, dairying and hog-raising section of the Union, and agriculturally the richest in the world. Why should not the Southern States utilize the linters produced by the oil mills instead of shipping them to other parts of the Union or exporting them? They are sold for one-half their value and shipped North, East and West and to Europe, only a small part of them being consumed in the South. Thousands of bales come back to us in mattresses, pillows and quilts and other goods at enormous increase in the market value. We do not export hulls, probably because we have not found ships big enough to carry them, but we sell them at about one-third of their value compared to other feedstuffs. If the cattle and dairy interests were promoted as they should be, by the increased sale of meal at home, the demand for hulls would also increase the value of that product to something like its worth. A publicity bureau should not only be an information and advertising bureau, but an educational one. It should have representatives not only in foreign markets where cottonseed products are now sold, but should investigate others where these products might be sold. Conditions in these markets should be studied and regularly reported, and the information published for the benefit of the members of the association. Success is dependent on a knowledge of conditions affecting the products' stocks, consumption and values. The demand for these products should be increased by extensive advertising and by such other means as might be found expedient. Active and well-informed solicitors should be put in the home market who are fully informed on the value of the products and on those with which they compete. They should lecture in every community where these commodities should find a market. Practical demonstrators should be employed to show the superiority of cottonseed products over those of any competitive commodity. The directors of the State experiment stations should be interested in the subject. These stations are supported largely in some sections by special taxes, a large proportion of which is paid by the oil mills, and it is only fair that the mills should receive a proper return for their contributions. The directors no doubt will be quite willing to co-operate with the mills in promoting a matter of so much importance to the agricultural interests.

"The trade journals and press generally,

especially of the South, should be interested in this general movement, the success of which would be of great benefit to them. A regular press bureau should be established. The advertising columns of the best publications should be utilized and paid for by the Association. When the mills have shown a proper appreciation of their products they can expect governmental aid regarding foreign markets and conditions, and the experience of the members of the publicity bureau in Washington leads us to believe that such assistance can be obtained. With the press aroused, the experiment stations giving their assistance, the advertising columns of the papers utilized, and with lecturers and demonstrators in the field, and with the co-operation of the United States consuls, the bureau would within a few years create a demand for cottonseed products that would place them beyond any danger of depreciation. Believing that a publicity bureau would do much to obtain for the industry a part at least of the abundant prosperity of the country, the committee recommends that the subject be taken up for discussion at this meeting and continued if a practical plan can be devised. If this is done, the present committee asks to be relieved of the work for the coming year, except such aid as they may individually give to those who may be appointed in their places, which they will gladly give at all times.

"In conclusion, Mr. President and gentlemen, by your splendid energy you have created a great industry within a generation; you have produced more articles of prime necessity to the world than any other industry ever established; you have invested \$100,000,000 in this business; you have given employment to over 25,000 people; you have provided the purest, sweetest and most wholesome cooking material ever discovered; you have produced the highest grade of stock feed; you have made stock-raising and dairying in the South an industry; you have increased the fertility of the soil, making large crops possible; you have added \$100,000,000 annually to the value of the cotton crop and \$30,000,000 annually to the export trade of the country. To firmly establish this magnificent industry, further increase its usefulness and obtain the just reward of your labors, you need what someone has happily called the 'hypnotism of the types.'"

Cotton Meal vs. Cottonseed as a Fertilizer.

Director R. J. Redding of the Georgia Experiment Station, in his paper discussing the comparative merits of cottonseed and cotton meal as fertilizing materials, said:

"It is well known to you all by history and tradition, and by personal experience and participation to many much younger than myself, that for generations 'before the war' and for some years thereafter cottonseed was the main reliance of the farmers of the South as a manure. Just at this point it may be well to correct some erroneous statements that gain currency in the public press ever and anon in regard to the uses and abuses of cottonseed—statements that reflect on the common intelligence of the farmers of 40 years ago and more. We have often heard it said that cottonseed was considered a nuisance by our fathers and forefathers; that it was a burning and unsolved problem how to dispose of this two-thirds of the output of our crops; that the seed were permitted to rot in masses around the ginhouses or were hauled off to the swamps or thrown in the streams in order to get rid of their noisome effluvia. In a word, it was claimed that the farmers of the old school did not know the value of cottonseed as a feed and as a fertilizer.

All of which statements are without foundation in fact, or with but little better foundation than the charge that used to be made by our friends in the North, that we cotton-growers were accustomed to feed our slaves on cottonseed.

"The simple truth is that on a few farms on the alluvial lands along our watercourses, on which the soils were very rich, especially in nitrogenous matters, cottonseed was not found to be effective as a fertilizer, particularly on cotton. The owners of those farms thought that their soils were so rich that cottonseed would not make them richer. We now know that the reason why cottonseed is not effective in rich virgin and alluvial soils is because the chief plant-food constituent of seed is nitrogen, and that these soils are already abundantly supplied with that element.

"But the farmers of the 'old red hills' of Georgia and of the adjoining States were accustomed to use cottonseed as a manure for wheat, oats, corn, sugar-cane, garden vegetables, etc., 'time whereof the memory of man runneth not to the contrary.' But it is true that the farmers of the day knew nothing about cottonseed meal and cottonseed oil, for they had never seen the seed separated into its constituents. Cottonseed has undoubted merit as a manure, or rather as an ingredient of a fertilizer. Its conspicuous defect is the fact that its content of nitrogen is out of all just proportion to its content of phosphoric acid and potash. It is 'complete,' in that it contains all three of the so-called elements, but is almost as badly balanced as is stable manure. As we can now readily understand, it was most effective when applied to a crop—such as wheat, oats, corn, garden vegetables—that requires a large percentage of nitrogen. This unbalanced natural composition, while a serious defect, may be readily remedied by composting the seed, in the soil or otherwise, with the proper quantities of acid phosphate and some form of potash. Another defect is the necessity for partially rotting the seed in order to prevent germination.

"It is a fact, however, that well-rotted cottonseed is really more effective than the unrotted crushed seed, because in that form it is much more than quickly available. Let us now examine into the merits of cottonseed meal as a fertilizer or fertilizer ingredient.

"(1) Its mechanical condition is practically perfect, permitting it to be distributed with ease or readily mixed with other ingredients.

"(2) It is quicker in action than the raw or unrotted seed.

"(3) It is less bulky and less offensive to handle.

"Its defects are, as in the case of the seed, that it is badly balanced, being even worse in this respect than cottonseed, containing as it does nearly three times as much nitrogen as of phosphoric acid, and nearly five times as much potash. It is too rich in nitrogen when used alone for any crop that is planted.

"But cotton meal is a remarkably convenient nitrogenous ingredient in preparing a complete and well-balanced fertilizer for any crop that requires such a fertilizer. I may be permitted to pause long enough to give the need of praise to the memory of my old friend Col. Geo. W. Scott, who was the first among manufacturers to employ cotton meal as the nitrogenous ingredient of fertilizers.

"Up to this point it perhaps has not been manifest what direction this discussion will take and what propositions will be affirmed. I will now affirm and hope to be able to maintain the following propositions:

"(1) That cotton meal is a cheaper and more effective fertilizer than cottonseed.

"(2) That a farmer should never use

cottonseed directly as a fertilizer when he may exchange it for a fair equivalent of meal.

"(3) That, all things considered, 800 pounds of cotton meal are equivalent as a fertilizer to 2000 pounds of cottonseed."

Professor Redding gave actual analyses of cottonseed and of cottonseed meal and hulls, and discussed them at length. He described in detail field experiments in fertilizing, and said:

"In conclusion, on the particular propositions that I have been discussing, it seems clear, both from consideration of the chemical analyses of cottonseed and cotton meal, that it is a wasteful and unwise practice to use cottonseed directly as a fertilizer when it can be exchanged for cotton meal on a fair and equitable basis.

"This brings up the question, which is the real crux of the problem. How much meal should the oil-mill man give in exchange for a ton of seed? With the given facts of analyses and the results of actual experiments in the field, together with the market price of oil and meal, there should be no real difficulty in reaching a mutually satisfactory basis of exchange between the producer and the oil mill. The farmer should in no conceivable case receive less than 800 or 900 pounds of meal in exchange for one ton of seed, after allowing for the expense and labor of hauling to and from the point of delivery. The oil-mill man must get his expenses and profits for operating the mill out of the oil. It is quite evident that the value of the oil should be divided between the producing farmer and the oil mill on a fair basis, and this basis must be determined mainly by the current market price for the oil. In my own experience I have found it much better to hold on to the seed until the approaching close of the crushing season, when the millowner is hard up for seed to keep his machinery going. I have usually had no difficulty in exchanging on a basis varying from 1400 to 1800 pounds of meal in exchange for a ton of seed delivered at the mill.

"I shall close this paper by saying that a farmer should not use cottonseed meal as a fertilizer so long as he has cows and beef cattle to consume it. I have been insisting that he should exchange his seed for meal and use the latter as a fertilizer rather than the former. But the true policy is to use neither seed nor meal as a fertilizer if practicable to avoid such use.

"I beg leave to include, as part of this paper, a short article written by me and published in the *Cottonseed* of this city.

"On the basis of a 12,000,000-bale crop the total yield of cotton meal would be 2,250,000 tons. At \$22 per ton this would amount to \$49,500,000. Much the larger part of the meal consumed in the South is for fertilizing purposes. This ought not so to be. It is an exceedingly wasteful practice. Let's see: Cottonseed meal contains about 7 per cent. of nitrogen, 2½ per cent. of available phosphoric acid and 1½ per cent. of potash. At the market prices of fertilizer elements the value of one ton would be \$25. If properly mixed and applied as a fertilizer the increased yield of crop would be a little greater than from an equal value of commercial fertilizers. But the meal is of great value as food for animals, especially for dairy cows and fattening steers. One ton of cottonseed meal fed to good-grade steers would produce not less than 400 pounds of dressed beef, worth not less than \$24, a profit of \$2 for each ton of meal fed. Now it is a known fact that the manure from the animals thus fed will contain at least 90 per cent. of the fertilizing value of the meal. So we add 90 per cent. of the \$22, or \$19.80, to the \$24, returns from feeding, and we have \$43.80 as the returns from a ton of meal that cost \$22. But we may safely assume that the manure from

a ton would produce an increased yield of not less than an average of 1200 pounds of seed cotton worth, at 10 cents per pound of lint and 60 cents per 100 pounds of seed, \$45, or an excess of \$24.80 over the estimated value of the manure. Add this \$45 (instead of \$19.80) to the \$24 worth of beef, and we have \$69 as the complete returns from a ton of meal that cost \$22, a clear profit of \$47, or 214 per cent. on the \$22. Now compare the two practices:

(1) One ton of meal fed to steers, costing \$22 00	
Resulting amount of dressed beef at 6 cents.....	\$24 00
Resulting increased yield of cotton from manure.....	45 00
	69 00
Clear profit (214 per cent.).....	\$47 00
(2) One ton of meal used as a fertilizer, costing.....	22 00
Resulting amount of seed cotton (1330 pounds).....	49 65
Clear profit (125 per cent.).....	\$27 65

"In other words, from one ton of meal costing \$22, fed to beef cattle and the manure applied to cotton, the farmer gets back \$24 worth of beef and \$45 in cotton, a total of \$69; and from one ton of meal costing \$22, applied directly to cotton, the farmer gets back \$49.65 value of cotton. In the first case the profit of one ton of meal is \$47, or 214 per cent. In the second case the profit of one ton of meal is \$27.65, or 125 per cent.

"In the foregoing calculations it was assumed that the manure from the ton of meal, estimated on the basis of its content of plant food as worth \$19.80, would produce no greater increased yield of cotton than an equal value of commercial fertilizer. As a matter of fact it would produce considerably more. The manure from the ton of meal would probably be fully as effective as the ton of meal itself, besides proving more lasting in its effects.

"So it seems clear that for every ton of meal used directly as a fertilizer the farmer loses nearly \$20 (\$19.35) as compared with the results from feeding the meal to beef cattle and carefully preserving and applying all the manure to cotton.

"The same results, substantially, would follow from feeding the meal to dairy cows, sheep, and possibly horses and mules.

"It is not intended to minify the value and effectiveness of cottonseed meal as a direct fertilizer. When properly balanced by adding acid phosphate and potash there is no better fertilizer made. But the main purpose of the argument is to show that the feeding of cotton meal to live-stock is very much more profitable than the use of it direct as a fertilizer."

Cottonseed Meal as a Human Food.

Prof. J. H. Connell, editor-in-chief *Farm and Ranch*, Dallas, Texas, discussing the possibilities of cottonseed meal as food, said:

"Who can assume the real value of a new breadstuff to humanity? In view of the decreasing supply of wheat in the world within the past decade, the passing out of wheat lands and the steady increase in population, the economist and the scientist will do well to cast about for a new source of supply of the staff of life. At the International Conference of Scientists held in London a few years since a dearth of breadstuffs was foretold, but we need never question the ingenuity of man, for wherever a real need develops invention supplies the want. Wheat has been employed as a breadstuff for centuries before the building of the Pyramids in Egypt, and will no doubt continue to sustain the intellectual and physical vigor of the human race in the main for centuries to come. But for economic reasons we shall do well to supplement this principal source of supply with other proper materials. The bakers of our cities are now combining the hard or macaroni wheat flour with the soft wheat. They are using rye flour ex-

tensively for dark or black breads, and in foreign countries meal from rape seed, from cottonseed and from various nuts is being freely combined with wheat flour.

"In June, 1905, it was my pleasure to bring to the attention of the Texas Cottonseed Crushers at their annual convention a few self-evident truths concerning the value of cottonseed meal as a breadstuff. Since that time my interest in the subject has steadily increased, and some very practical facts have been developed. In my experience with cottonseed meal as a breadstuff no disappointment has been encountered. I invite your critical judgment on the samples of cottonseed-meal bread and cake distributed for your information and possible approval. I trust that you will find these specimens pleasant to the palate and entirely free from any objectionable taste or odor. But at the outset it should be clearly understood that cottonseed meal should never be used alone in breadmaking; in fact, pure cottonseed-meal bread is a scientific absurdity, however practicable it may be from a culinary standpoint. Its composition would closely resemble cheese, being ever rich in protein and having no parallel in the world's food supplies. A combination of cottonseed meal with other recognized breadstuffs will greatly enrich the flours and meals now in use, while at the same time decreasing their cost to the consuming public. Within a short time I trust that the cottonseed crushers of the South may be able to announce the actual discovery of 4,500,000 tons of a new breadstuff fit for human consumption. If so, this material will approximate in quantity and far exceed in value the wheat crop of the largest wheat-growing State in this country.

"Let us consider for a moment cottonseed meal, its origin, its composition, its value. This golden product is safely wrapped by 'Dame Nature' in a wooden cradle that we call the hull, and here in the womb of the plant, hermetically sealed with five waterproof coverings, there is elaborated the richest of all feedstuffs and breadstuffs. This insures cleanliness and freedom from disease, but to make assurance doubly sure, we find that during the process of manufacturing the meats the whole mass of meal is sterilized by thorough cooking in order to more perfectly express the oil.

"We will next compare its nutritive value with corn flour and cornmeal. These are chiefly valuable for their protein, but we find that cottonseed meal contains three times as much digestible protein as the highest grade of wheat flour or the best breakfast food now upon the market. Stated percentage, we find that the nutrients run as follows:

Nutritive Composition of Standard Breadstuffs.

Material.	Water.	Pounds per Hundredweight.			
		Protein.	Fat.	Carbohydrates.	Ash.
First patent flour.....	10.5	11.8	1.1	76.8	0.37
First clear-grade flour.....	10.3	13.7	2.2	73.1	0.80
Cornmeal.....	10.6	10.3	5	70.4	1.50
Cottonseed meal.....	8.2	42.3	13.1	30	7.2

"The yellow color of cottonseed meal is due to a substance known to chemists as gossypin. It affords a golden yellow dye for both silk and wool.

"The protein in our cottonseed meal, according to the Connecticut station, consists largely of globulin 'agreeing in composition and general properties with the vitellin obtained from the seeds of wheat, maize, etc.'

"Sugar is found in cottonseed meal, as determined by German investigators, which can be extracted with warm alcohol, obtaining about 3 per cent. of crystallizable material. To this sugar Bohm gave the name gossypose.

"The above facts should encourage the scientists as well as the oil-mill interests to press the introduction of cottonseed meal as a breadstuff upon the attention of our people. Will the government help?

There is literally nothing in print from our English-speaking scientists to show that any investigations have been undertaken with cottonseed meal as a human food.

"There exists in the minds of many scientists and officials of this country a harsh prejudice against cottonseed meal. It is the orphan member of the agricultural family, the stepchild of Uncle Sam's great industries. Northern writers in the agricultural press have for years hurled their shafts of criticism against cottonseed meal, declaring it to be an active poison and dangerous at all times and in all quantities.

"If animosity shown cottonseed and cottonseed oil by the government continues, it will come, as a matter of course, that your margin of profits will be less, and that the producer of cottonseed will be unable to secure fair prices for Southern cottonseed. In view of the further fact that the cottonseed output of Southern mills represents 41 per cent. of the value of your total crush, the oil representing practically the same value, should not strong efforts be concentrated to bring influences to bear upon the bureau of animal industry and the bureau of plant industry to secure such recognition of cottonseed meal as a foodstuff and as a human food as its merits deserve?

"All persons eating cottonseed meal in combination with other breadstuffs have expressed great surprise at its rich flavor and its entire wholesomeness. On the 10th of May I had the pleasure of entertaining at my table the executive committee of the Texas Farmers' Congress by invitation, and these guests ate freely of cottonseed-meal and wheat-flour muffins, and expressed their delight, satisfaction and surprise. It is worthy of note that cottonseed meal carrying about 12 per cent. of vegetable oil requires no addition of shortening material. Furthermore, it is surprisingly amenable to all of the laws of cooking, and, according to the investigations of Dr. Kilgore at the North Carolina experiment station, it renders all other foods eaten more easily digested.

"We are sometimes inclined to overestimate the prejudice existing in the minds of our people (the laymen) against the use of cottonseed meal and cotton oil. As an indication of the truth of this assertion, permit me to call attention to the fact that about two years ago the pages of *Farm and Ranch* were open for the discussion of these topics, and facts bearing particularly upon the feeding of cottonseed meal to hogs according to the Allison method briefly stated. Since that time every issue of *Farm and Ranch* is flooded with cottonseed meal and cotton-oil articles in the nature of 'comebacks,' and

nearly all approving the more liberal use of these Southern products. The Southern press should in every case prove itself friendly to the cause of cotton, cottonseed and their products. As another evidence of the ease with which local prejudice may be broken down, I wish to personally testify that I have quite recently become a practical convert to the use of refined cotton oil for cooking and similar uses. I have used it for weeks and months consecutively in my home to the exclusion of hog lard.

"The best improved olive oil which reaches America from Italy is said to carry a large per cent. of 'American olive oil,' manufactured from the cottonseed.

"Having used cottonseed meal freely in making both corn and flour muffins, biscuit, pancakes, ginger bread, dark Graham bread, together with dark cakes of all

sorts, there is now no reason to doubt the entire fitness of cottonseed meal for combination with other breadstuffs. If called to reduce the foregoing scattering facts to a commercial proposition at this time—preparing cottonseed meal and placing it upon the market for consumption as a breadstuff—I would advise the organization of a special company for the specific purpose of marketing cottonseed meal in an acceptable form to the consuming public. It can be done. Were I permitted to occupy the role of prophet I would thrust back the curtain of years and see the cottonseed meal resulting from a 20,000,000-bale crush of cottonseed prepared as a white wholesome flour, robbed of its yellow dye and sold in cartons upon the markets of the world as the most valuable, the most concentrated and the highest-priced flour known to commerce. When at the end of 10 years the South grows 20,000,000 bales of cotton with its 20,000,000,000 pounds of seed, then the bread value of the meal in these seed will equal in nutritive value the present crop of 33,000,000,000 pounds of American wheat; for such

will be the result, I am satisfied, of the continued efforts of this Association of Interstate Cottonseed Crushers as it meets from year to year to consider the great economic problem that rests upon your shoulders."

In addition to the president's address and the two papers by Professor Connell and Dr. Redding, respectively, the addresses of welcome by Governor Terrell, Mayor Woodward and President Jones of the Chamber of Commerce, and replies by President Hamilton, Mr. F. H. Bailey of Paris, Texas, and Mr. Ernest Lamor of Selma, Ala., the program includes reports by Mr. Robert Gibson, Dallas, Texas, the secretary and treasurer of the association; by Mr. I. Jalonik of Dallas, Texas, on mutual fire insurance; by Mr. F. H. Dailey of Paris, Texas, on rules, and by Mr. L. A. Ransom of Atlanta on the bureau of publicity, and open discussion by individual members of topics of interest to the industry. The election of officers and other routine business is set for Thursday.

JOHN BANNON.

WEST VIRGINIA'S RESOURCES.

[Written for the Manufacturers' Record.]

One of the best expositions of the opportunities for manufacturers, investors and others in any Southern State that has recently appeared is the booklet published by the West Virginia Board of Trade for the purpose of showing the vast resources and great advantages of a State whose rapid development is hardly appreciated in some parts of the country. The greater portion of the publication is devoted to succinct descriptions of the industrial and business situations at such cities as Bluefield, Charleston, Charles Town, Elkins, Fairmont, Grafton, Huntington, Keystone, Kingwood, Morgantown, Moundsville, New Martinsville, Parkersburg, St. Marys, Sistersville, Wellsburg, Wheeling and Williamson, which are represented in the State Board of Trade. As an introduction is published a sketch described by Mr. R. B. Naylor of Wheeling, secretary of the board, as follows:

"First we have a general article on the State kindly contributed by Mr. Albert Phenix, special correspondent of the *MANUFACTURERS' RECORD* of Baltimore, who has located at Charleston, the State capital, to report for his paper the progress of our wonderful development. Mr. Phenix is a trained observer of long experience, and there is no more enthusiastic believer in West Virginia's great future. His views should carry much weight, not only because he is an authority on such matters, but also for the reason that he is an outsider, a disinterested party, one who is unswayed by State pride and untouched by native enthusiasm. He believes in West Virginia, and has ample reasons for the faith that is in him."

Through the booklet a warm welcome is extended by West Virginians to new enterprises and new people to share in their prosperity and to aid in the further development of the State's great natural wealth for their mutual advantage, and among the facts presented as an inducement to newcomers are the following:

West Virginia is one of the few States in the Union out of debt.

Property values have doubled in the past 20 years, and under a new system of taxation the aim is to reduce and equalize taxes to the benefit of all.

The population is now about 1,250,000.

During the past year 13 new banks were started, and there are now 142 State banks, 76 national banks and 22 trust companies with deposits aggregating \$68,000,000.

It is estimated that in the past three

years more than \$100,000,000 has been invested in coal and timber land, coal and timber operations and railroad construction.

The State has more than 5000 manufacturing establishments, with about \$80,000,000 capital, and \$125,000,000 worth of products going to all parts of the United States and to foreign countries.

Cheap and abundant fuel and cheap and abundant raw material are in close relation in the State.

The output of coal has increased in 25 years from 1,400,000 tons to 38,000,000 tons annually, the coal fields comprising 17,000 square miles and the development of them only just fairly started.

Petroleum of fine quality is found in nearly every section of the State, and 12,500,000 barrels were produced in 1905.

In hundreds of communities natural gas is furnished for power, heat and light.

Though the lumber interests have grown to enormous proportions, millions of acres of splendid forest lands are still awaiting exploitation.

Nearly 13,000 ovens in 11 counties are producing an excellent quality of coke in steadily-increasing quantities.

Quantities of iron ore are in 22 counties. There is fire-clay in many sections, principally Hancock, Marion, Monongalia, Taylor, Harrison and Mason counties; potter's clay in extensive deposits; building stones of several varieties; glass sand in abundance and of excellence, and marble in many localities, the most valuable deposits being in Pocahontas.

The climate, soil, water, grass and grain are highly favorable to stock farming, there are nearly 100,000 farms producing a great variety, and the hills and valleys are adapted to the culture of many kinds of fruit.

The West Virginia climate is healthful and salubrious, free from the extremes of heat and cold and storms.

It has splendid schools and colleges, with a State University.

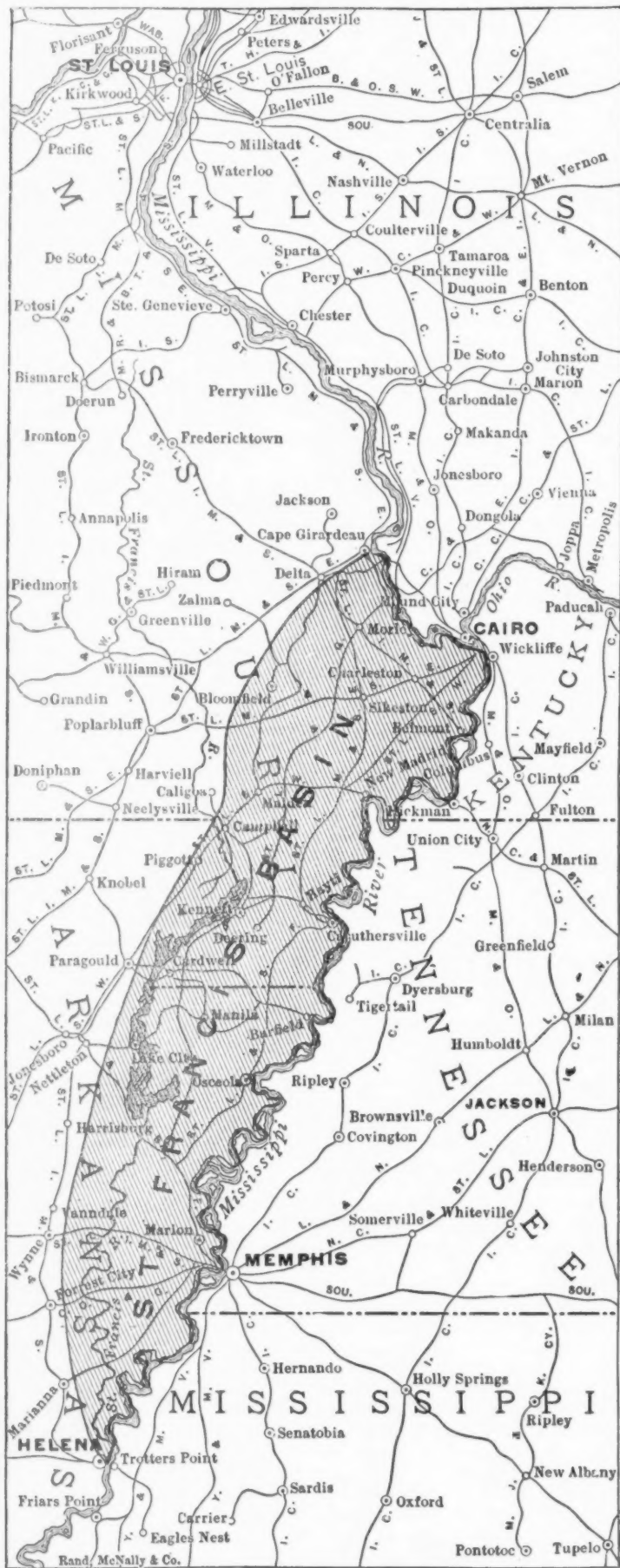
Many lines of railroads, with new ones under construction involving the investment of millions of dollars, including the Baltimore & Ohio, the Norfolk & Western, the Chesapeake & Ohio, the West Virginia Central and the Coal & Coke, furnish rail facilities, while cheap transportation is also offered by the Ohio and Kanawha rivers and other streams, in a number of which improvements are contemplated, thus giving West Virginia an admirable situation for manufacturing and trade.

IMPROVING THE ST. FRANCIS BASIN.

[Written for the Manufacturers' Record.]

The meeting this week at Caruthersville, Mo., of the St. Francis River Improvement Association calls attention to a project, the reclamation of a vast tract of valuable land in Southeastern Missouri

it was thrown into a chaotic state, seriously interfering with its proper development. The St. Francis basin, shown in the accompanying map, extends from Cape Girardeau, Mo., and Cairo, Ill., to Helena,



and Northeastern Arkansas, in which the people of several great States are directly interested. As a result of a seismic disturbance nearly a century ago the St. Francis river was diverted from its natural course and the territory drained by

Ark., 200 miles long and 40 miles wide, between the Mississippi and the St. Francis rivers. It embraces 3,897,000 acres of land and has a population of 200,000, though it is fully capable when drained of supporting 2,500,000 persons.

About 20 years ago the United States government initiated steps for the reclaiming of these lands, and complete surveys were made and maps published, thus revealing to the world the extremely rich and fertile lands of this section, which were until then practically unknown. In 1893, however, the legislatures of Arkansas and Missouri, acting in conjunction with the United States government, initiated steps for the construction of a continuous levee from New Madrid, Mo., to Helena, Ark., to protect this valley from any overflow whatever, which levee has just been entirely completed. This is resulting in a wonderful development of this valley, which is traversed by about 1200 miles of railroad, most of which has been constructed in recent years. The main line of the Frisco-Rock Island system from St. Louis to Memphis, which is the shortest line between these two points, traverses this valley from north to south.

The St. Francis valley directly borders on the States of Illinois, Missouri, Kentucky, Tennessee, Mississippi and Arkansas, these States having a combined population of 10,703,751. This alluvial valley, whose fertility is almost incomprehensible, being the center of this great population and possessing the very best transportation facilities afforded by the 1200 miles of railroads and the Mississippi river, giving it cheap water transportation with such cities as Pittsburg, Cincinnati, Chicago, St. Louis, Memphis and New Orleans, is undoubtedly destined to be the very garden spot of the entire United States.

The St. Francis River Improvement Association, formed in May, 1903, has for its purpose to improve the St. Francis river and its tributaries to the St. Francis basin by any means possible; to memorialize Congress for such assistance as can be obtained by the rivers and harbors appropriations; to co-operate with levee boards, irrigation congresses and other waterway associations for the advancement of our mutual interests; to assist in the framing of such laws in the State legislatures of Arkansas and Missouri as will be conducive to better drainage and navigation throughout the whole St. Francis basin; to publish such maps and literature as will advance this object, and to promote a bond of union and a feeling of common fellowship throughout this entire St. Francis basin, irrespective of State bounds.

It is estimated that by improving the St. Francis river the government will open for development and cultivation 6090 square miles of the richest sort of alluvial land, and that the cost will be only \$2,000,000. The association is working energetically to organize public opinion that shall appeal practically to Congress for prompt and definite action.

Immigration at New Orleans.

[Special Cor. Manufacturers' Record.]
New Orleans, La., May 14.

Much uneasiness has been caused those interested in immigration to this section by the semiofficial statement from the Belt Railroad commission that the influence of the board of port commissioners (dock board) would result in the refusal of the Belt Railroad commission to accept a proposition made by the Southern Pacific Railroad allowing the Belt Railroad right of way for one track through the Southern Pacific yards, and agreeing to erect an immigrant station at the old Southern Pacific ferry landing at a cost of \$15,000. The reason assigned for the prospective rejection of the proposition is that the interests of the Belt Railroad require two tracks through the Southern Pacific property. Almost simultaneously with this announcement came the statement that the North German Lloyd Steamship Co. con-

templated establishing a line of immigrant ships to New Orleans. Fearful that the erection of the station might be prevented by the differences between the transportation companies, Col. Charles Schuler, commissioner of agriculture and immigration, has taken a hand in the matter and has called a conference of interested companies with a view to harmonizing the differences.

Acting on the advice of the attorney-general, and with the authority of the governor, the Louisiana Oyster Commission has formally extended its jurisdiction over the 300 square miles of territory formerly claimed by the State of Mississippi as part of that Commonwealth, but which recently was adjudged Louisiana territory by the United States Supreme Court. This action was taken immediately upon the attorney-general's receiving notice from Washington that the Supreme Court had entered its final decree in the dispute. In a proclamation to the Mississippi Oyster Commission and to the oyster canneries along the Mississippi coast the president of the Louisiana Oyster Commission issued a warning that the supply of oysters for Mississippi canneries could not longer be drawn from the waters in question.

A. R. HOLCOMBE.

COAL FOR CHICAGO.

Drawing Upon the Kentucky and Tennessee Fields.

[Special Cor. Manufacturers' Record.]
Middlesboro, Ky., May 12.

Kentucky and Tennessee coal is now finding a ready market in the North, and so great has grown the demand from that source that it has been difficult to fill orders lately. The orders are principally from consumers whose supply has been shut off by the strike in some of the Northern districts. Many orders have been received during the past few weeks by wire and mail from large firms in Chicago and other cities of Illinois and Indiana, and the expanding market is greatly stimulating the coal-development industry throughout this region. Several large concerns have been investigating the situation with the view to drawing their future supply from Kentucky and Tennessee, and in several instances contracts have been entered into for the entire output of various mines.

The largest of these deals has just been consummated between Henry Holverschild & Co. of Chicago and the Cumberland Coal Co. of Artemus, Ky., the Chicago concern contracting for the entire output of the new Cumberland mines in Knox county. A daily output of 50 cars will be obtained within a few weeks, when mining on a regular scale is commenced. The Bell-Jellico, Bennett-Jellico and East Jellico companies, other Knox county concerns, are negotiating with Chicago firms for their outputs.

The Manring Coal Exchange of this city has been organized to handle the production of concerns which are listed with the exchange. About eight concerns now leave the marketing of their production to the exchange, which has just established a Northern office in Cincinnati and a Southern office at Knoxville. Officials of the concern have been in the East, and it is possible another office will be opened.

Several large coal-development concerns have started work in the Kentucky-Tennessee fields during the past few weeks, and projects now under way in Bell, Knox, Whitley and Laurel counties, this State, and Claiborne and Campbell counties, Tennessee, will represent an expenditure of not less than \$1,000,000.

W. S. HUDSON.

Mr. Robert Jemison, Jr., has been re-elected president of the Commercial Club of Birmingham, Ala.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

The Mayes Manufacturing Co.

Last week the MANUFACTURERS' RECORD reported the incorporation of the Mayes Manufacturing Co. of Charlotte, N. C., with a capital stock of \$100,000. It can now be stated that the company will install 10,000 spindles to begin with, and intends to have 25,000 spindles eventually. Mr. Stuart W. Cramer of Charlotte has been chosen as engineer in charge, and he will have plans and specifications for buildings ready for bids in about four weeks. Contracts for the textile machinery for manufacturing fine combed and carded yarns have been awarded to the Whitin Machine Works of Whitinsville, Mass.; Kitson Machine Co. of Lowell, Mass.; Woonsocket (R. I.) Machine & Press Co.; T. C. Entwistle Company of Lowell, Mass., and Foster Machine Co. of Westfield, Mass. The Mayes Manufacturing Co. has organized with J. H. Mayes, president; L. A. Dodsworth, secretary-treasurer, and T. E. Moore (of Tucapau, S. C.), vice-president.

The Jonesville Manufacturing Co.

The MANUFACTURERS' RECORD of April 5 announced the purpose of the Jonesville Manufacturing Co. of Jonesville, S. C., as to increase its capital stock from \$175,000 to \$350,000 for the purpose of building a mill of 10,000 spindles, 300 looms and accompanying apparatus for the production of sheeting. Last week the stockholders authorized this increase and construction work will be proceeded with. As stated recently, contracts have been awarded for the machinery, and the new building will be of brick construction, two stories high, 100x200 feet, and J. E. Sirrine of Greenville, S. C., is the architect-engineer in charge.

The Aragon Cotton Mills.

Last week the MANUFACTURERS' RECORD referred to the incorporation of the Aragon Cotton Mills of Rock Hill, S. C., by well-known cotton manufacturers. It can now be stated that the company will have a capital stock of \$350,000 and Alexander Long will be president and treasurer. The company will build a plant for 20,000 spindles and 600 looms, to be operated on the production of four-yard sheeting, and about 250 operatives will be employed. The architect-engineer in charge of construction and equipment is J. E. Sirrine of Greenville, S. C. Details of buildings and equipment are now being considered.

The Columbus Yarn & Cordage Co.

The Columbus Yarn & Cordage Co. of Columbus, Miss., has decided to rebuild at once its cotton cordage mill, which was destroyed by fire on May 5 at a loss of \$35,000. A new plant of larger capacity will be constructed, and bids for construction materials and cordage-making machinery may be addressed to I. H. Sykes. The burned plant had 11 looms, 5 spinning machines and other apparatus, including a complete steam plant.

Steam Turbines in Cotton Mills.

That steam turbines are adaptable to cotton-mill work is again evidenced in the fact that the Francis Cotton Mills of Bis-

coe, N. C., has adopted Westinghouse-Parsons turbines for its power plant. This plant adds one more to the list of cotton mills using steam-turbine power.

Some of the plants in this field are those of the Pelzer (S. C.) Manufacturing Co., 1500 kilowatts; the Oneita Knitting Mills, Utica, N. Y., 500 kilowatts; Henrietta (N. C.) Mills; Gray Manufacturing Co., Gastonia, N. C.; Modena Cotton Mills, Gastonia, N. C., and the Lumberton (N. C.) Cotton Mills.

Mollohon Mills to Enlarge.

At the annual meeting of the Mollohon Manufacturing Co. of Newberry, S. C., to be held on June 15 the stockholders will vote on a proposition to increase capital stock from \$500,000 to \$1,000,000 for the purpose of enlarging the present plant of 29,952 spindles and 672 looms. It is expected that there will be no opposition to this proposition, and the new capital will be expended to install 13,000 spindles and 328 looms in the mill. Construction work will then be undertaken and pushed rapidly. Next year the company intends to build a No. 2 mill.

The Beaumont Improvements.

The Beaumont Manufacturing Co. of Spartanburg, S. C., has completed the improvements and enlargements which have been in progress for some months. It has erected an addition two stories high, 70x220 feet, and installed 4000 spindles and complement for manufacturing yarns. In providing for this enlargement and some other improvements the company increased its capital stock from \$100,000 to \$210,000.

The National Cotton Mills.

The MANUFACTURERS' RECORD of April 26 referred to the National Cotton Mills of Lumberton, N. C., as incorporated and being organized. The company has now elected N. A. McLean, president; Geo. B. McLeod, vice-president; A. P. McAllister, secretary-treasurer, and J. W. Kaneer, superintendent. The company has an authorized capital stock of \$200,000 and details as to the mill are now being considered.

The Columbus Hosiery Mills.

The Columbus Hosiery Mills of Columbus, Miss., which has been idle for some time, will be increased in capacity and put in operation. It is the intention of the company to purchase 25 200-needle and 25 84-needle machines, the present equipment of the plant being 60 machines. This new machinery is now wanted, and I. H. Sykes can be addressed regarding its purchase.

Woolen Mill for Kentucky.

The James Cate & Son Company has been incorporated with a capital stock of \$25,000 for the manufacture of woolen blankets, linseys, flannels, etc. This company will enlarge and continue a plant owned by the Messrs. Cate, and plans to build an entirely new mill in the near future. Messrs. James Cate, J. H. Cate and John T. Edmunds are the incorporators; location, Hopkinsville, Ky.

The Clover Enlargement.

The Clover Manufacturing Co. of Clover, S. C., will erect an additional building one story high, 100x200 feet, to accommodate the 5000 ring spindles and accompanying preparatory machinery recently announced as to be added. Probably more than \$75,000 will be expended for this enlargement. The company at present has 15,000 spindles.

The Hermitage Cotton Mills.

The stockholders of the Hermitage Cotton Mills of Camden, S. C., have decided

to add 3000 spindles, which will fill their present building. This company now has 12,064 spindles and 200 looms, and the new spindles will be accompanied by looms to match. Probably from \$35,000 to \$45,000 will be expended for the betterments.

Another Mill for Dalton, Ga.

Another cotton factory will be built at Dalton, Ga. It is the project of M. C. Foster, who with associates will organize a stock company to manufacture ply yarns—4s to 16s. An equipment of 7500 spindles is contemplated, and \$165,000 has been subscribed to the capital stock.

Textile Notes.

The Baldwin Manufacturing Co. of Elk Mills, Md., is building a new weaveroom addition 50x100 feet.

J. M. Odell Manufacturing Co., Pittsboro, N. C., now operating 7000 spindles, will add spindles next year.

The Cincinnati (Ohio) Wool Co. will establish a woolen mill in Newport, Ky., and has leased a suitable building for the purpose.

Messrs. W. McBride, W. A. Steed and others of Newnan, Ga., will organize company with capital stock of \$125,000 to build a cotton factory. A meeting was held last week to plan the enterprise.

The Bonham Cotton Mills of Bonham, Texas, has increased capital stock from \$130,000 to \$200,000. This action is taken in connection with the recent enlargement of the mill by the addition of 5000 spindles and 150 looms, which was referred to previously.

The Parker Hosiery Mill and Dye Works of Portsmouth, Va., has awarded contract for the erection of an addition, a one-story building, which will have an equipment of 50 knitting machines, 10 sewing machines, etc., for a daily output of 250 dozen pairs of hose. About 50 operatives will be employed. Mr. Jos. A. Parker is proprietor.

For Southeastern Immigration.

Mr. S. A. Hughes, general immigration agent St. Louis & San Francisco Railroad Co., St. Louis, Mo., writes to the MANUFACTURERS' RECORD as follows:

"Responsive to yours of recent date with reference to our plans for developing Southeastern territory, will state for your information that Mr. F. D. Fuller, who has taken up headquarters at Birmingham, is one of our land and immigration agents and has been located at Memphis for a number of years, working immigration into the Southwest territory tributary to our lines. He has, however, taken up a new field recently with a view to developing the territory tributary to the city of Birmingham, and he also contemplates working along the Atlanta & Birmingham and Atlanta, Birmingham & Atlantic Railroad, which I believe is now under construction. Mr. Fuller has stated to me that it is his intention to interest Northern capital in the above-described territory, and I trust he may be successful in his undertaking. I appreciate the fact that the South and Southeast offer many advantages to the homeseeker and investor, and inasmuch as there is a movement on foot at the present time to divert foreign emigration from Ellis Island to South Atlantic and Gulf ports, I believe that should this arrangement be consummated and these foreigners be placed upon the undeveloped lands of the South and Southeast the country will be greatly stimulated by this arrangement. We have made no elaborate plans for the carrying on of this work, but I merely give you a brief outline in the premises."

The assessed value of real estate in Atlanta is \$1,729,293 over that of last year.

COTTONSEED

OIL-MILL SUPERINTENDENTS.

Program of the Association's Meeting at Dallas.

At the thirteenth annual session of the Oil-Mill Superintendents' Association in Dallas, Texas, June 6-8 the following papers will be presented: "Steam Boilers," by T. J. McNulty, Brookhaven, Miss., and T. R. Crowson, Pecan Gap, Texas; "Importance of Cleaning Seed," by J. N. Roberts, Midlothian, Texas, and T. S. Samuels, Jacksonville, Fla.; "General Maintenance of the Mill," by T. G. Wolfe, Oklahoma City, O. T., and C. Y. Culbertson, Teanille, Ga.; "Engineering and Friction," by E. M. Byars, Waco, Texas, and Jas. W. Stevens, Caruthersville, Mo.; "Safety and Economy," by S. J. Duke, Pittsburg, Texas; "Development and Internal-Combustion Engines," by W. R. Haynie, Dallas, Texas; "Why All Superintendents Should Attend the Meetings of the Association," by M. W. Faherty, Memphis, Tenn., and H. H. Hodges, Kinston, N. C.; "Lubrication," by Mr. Smith, Oriental Oil Co., Dallas, Texas; "Handling Stock from Separator to Press," by M. B. Kooper, Little Rock, Ark., and H. C. Beasley, Grenada, Miss.; "Our Friend the Traveling Man," by Chas. Eubank, Dallas, Texas; "Care of Cake from Press to Car," by John B. Alford, Shawnee, O. T., and D. P. Baker, Magnolia, Ark.; "The Duty of the Superintendent to His Mill," by R. H. Craeford, Victoria, Texas, and Geo. T. Parkhouse, Sweetwater, Texas; "Elements of Success," by N. T. Blackwell, Dallas, Texas; "The Management of Labor in the Mill," by W. E. Spoons, Minden, La., and G. A. Baumgarten, Schulenburg, Texas; "Care of Oil From Press to Tank Car," by Wm. Bauer, Jr., Burton, Texas, and E. A. Carmouche, Tuscaloosa, Ala.; "The Former and Its Relation to the Oil-Mill Business," by C. N. Thatcher, Wills Point, Texas; "Lint-Baling Press," by Dr. A. D. Thomas, Little Rock, Ark., and "Conveyor," by A. A. Diffe, Fort Smith, Ark.

Mr. H. J. J. Thiessen is president and Mr. M. B. Wilson is secretary of the association.

Cotton-Meal Fertilizer.

[Special Cor. Manufacturers' Record.]

Columbus, Miss., May 10.

W. C. McClure, general manager of the Refuge Cotton Oil Mills and fertilizer plants of Columbus, Miss., in an interview with a representative of the MANUFACTURERS' RECORD, said: "The fertilizer season now closing has proved all through pleasant and profitable. The demand for fertilizer in this section has increased enormously, and while the soil itself is unusually fertile naturally, its peculiar physical composition is well adapted to the use of fertilizer, inasmuch as the maximum of benefits from the use of fertilizer are obtainable. We are operating two fertilizer plants, the combined capacity being 150 tons daily."

It is deserving of note that this firm, under Mr. McClure's management, was a pioneer in introducing the use of fertilizer in its section of Mississippi, the demand being now of such volume that many fertilizer plants are kept occupied to meet the demand. Another feature which indicates that the American agriculturist is becoming acquainted with the merits of cotton meal as stock-feeding product as well as fertilizer, like the European agriculturist, is the fact that not a ton of the output of the 80-ton mill of the Refuge Cotton Oil Mill, Columbus, Miss., is exported. All is used at home. Mr. W. C. McClure is also secretary and treasurer of the New South Plow Co. of Columbus, Miss., a concern incorporated under the

laws of Mississippi with an authorized capital of \$100,000. Mr. McClure is one of Columbus' most energetic and enterprising citizens, a man of executive ability and wide experience.

The planters in the neighborhood of Columbus have under consideration the question of erecting and operating small oil mills on the plantation grounds. It is expected that one of the planters will place an order for a three-press mill in the near future. In the majority of cases, however, the mills will consist of one press each. The method of crushing operations will be identical with those which prevail in Europe. The whole seed will be crushed, thus obviating the use of separating machinery. This will prove an innovation in modern American oil milling. Tests recently made would indicate that the preparation of stock food from undecorticated cotton cake, which is made by running the unhulled or whole seed through the crushing rolls, show good results. It is also considered that the use of the hulls in this form is more advantageous than when separated from the meats. To overcome the difficulty in crushing, which would be unavoidable in the use of the smooth chilled-roll surface, fluting or light corrugations in latter will be introduced. The planters in the immediate vicinity of Columbus control 100,000 acres of cotton land. By crushing the seed right on the ground where the cotton is picked it is considered that a material saving can be effected. JOHN BANNON.

Oil Mills Purchased.

The oil-mill plants and ginneries located at Darlington, Manning, Marion, Hamer, Cheraw, Kingstree, Timmons, Mullins, Syracuse, Lamar, Swift Creek, Auburn, Davis Station, Summerton, in South Carolina, and at Wadesboro, in North Carolina, with their equipment, and belonging to the Independent Cotton Oil Co. of Darlington, S. C., have been purchased by the South Atlantic Oil Mill Co. for a consideration of \$200,000. This is a new company and is said to be capitalized at \$850,000, of which \$700,000 is to be common stock. Mr. Henry Buist is its Charleston (S. C.) representative.

Sugar Refinery for Baltimore.

For some weeks past leading financiers and business men of Baltimore have been formulating plans for the establishment of an independent sugar refinery in this city. A committee which had been investigating the feasibility of the enterprise has reported favorably, and the plant will be known as the Chesapeake Sugar Refinery, which will have a cash capital of not less than \$1,250,000. Preliminary plans have been submitted by the George M. Newhall Company of Philadelphia, and provide for an output of 1500 barrels of refined sugar per day, the daily consumption to be a trainload of coal and several shiploads of raw sugar. A site of 12 acres has been optioned at Wagner's Point, in Anne Arundel county, on the Patapsco river, including a 300x350-foot wharf, while the Baltimore & Ohio Railroad is at hand providing shipments both by rail and water. The leading promoters of this project are Messrs. George R. Bower of Philadelphia, president of the Baltimore Chrome Works Co.; H. Carroll Brown of H. C. Brown & Co., Baltimore and New York; Francis K. Carey, president of the National Sugar Manufacturing Co.; Thomas J. Hayward of Bartlett, Hayward & Co.; C. Morton Stewart, Jr., of C. Morton Stewart & Co.; Charles A. Webb of the firm of A. L. Webb & Co., and John H. Windfelder, general manager of the National Sugar Manufacturing Co.

Mr. Francis K. Carey is chairman; Mr. Brown, treasurer, and Mr. James Piper, secretary.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER CUT IN 1905.

Preliminary Statement From Nearly 12,000 Firms.

The work of gathering and compiling the figures on the lumber cut during 1905 has been done by the forest service in co-operation with the National Lumber Manufacturers' Association. The summary here presented is based upon the reports of 11,649 firms.

The results given are necessarily incomplete, since many firms have as yet failed to furnish the necessary information. In completing these figures the secretaries of the various lumber associations are co-operating most effectively. A more complete statement will be issued when all reports have been received.

State.	No. firms reporting.	Lumber, million feet B. M.	Total cut, per cent.	Conifers, million feet.	Hardwoods, million feet.
Washington.....	425	3,010	10.8	3,010	...
Louisiana.....	269	2,943	7.3	1,987	56
Wisconsin.....	408	1,990	7.2	1,640	350
Minnesota.....	173	1,718	6.2	1,692	26
Michigan.....	437	1,676	6.0	1,065	581
Arkansas.....	853	1,457	5.2	1,080	377
Pennsylvania.....	701	1,342	4.8	998	344
Oregon.....	319	1,252	4.5	1,246	6
Mississippi.....	342	1,226	4.4	1,014	212
California.....	196	1,219	4.4	1,219	...
New York.....	1,014	446	1.6	390	86
North Carolina.....	159	381	1.2	365	16
Texas.....	326	841	3.0	754	87
Georgia.....	349	719	2.5	676	34
Virginia.....	452	708	2.5	554	154
Maine.....	364	695	2.5	659	36
Florida.....	122	652	2.3	652	...
West Virginia.....	284	545	2.0	309	236
Tennessee.....	499	544	2.0	40	504
Kentucky.....	431	467	1.6	36	431
New York.....	1,014	446	1.6	390	86
Missouri.....	223	353	1.3	185	168
South Carolina.....	194	351	1.3	325	26
Indiana.....	461	350	1.3	...	350
Ohio.....	541	331	1.2	329	2
New Hampshire.....	269	329	1.2	300	29
Vermont.....	284	265	1.0	170	95
Massachusetts.....	249	239	.9	217	22
Montana.....	23	231	.8	231	...
Idaho.....	54	197	.7	197	...
Maryland.....	113	164	.6	116	48
Illinois.....	176	120	.4	31	86
Iowa.....	29	107	.4	98	9
All others.....	337	279	1.0	206	73
Total.....	11,649	27,738	100.0	23,225	4613

The following table separates the cut by species and shows the relative position each species occupies in the lumber cut of the country. The stock on hand January 1, 1906, is also given, and its percentage of the amount cut. The stock of Western white pine is doubtless in excess of the true figure, due to confusion in reporting sugar and other related pines with this species:

Kind.	Total cut, Million P. ft.	Stock on hand, Million P. ft.
Yellow pine.....	8,217	29.5
Douglas fir.....	3,614	13.0
Northern pine.....	3,239	11.6
Hemlock.....	2,569	9.3
Spruce.....	1,128	4.0
White oak.....	1,071	3.9
Western pine.....	1,013	3.7
White pine.....	849	3.5
Cypress.....	697	2.5
Red oak.....	603	2.2
Poplar.....	590	2.1
Maple.....	507	1.8
Redwood.....	497	1.8
Red gum.....	307	1.1
Birch.....	275	1.0
Basswood.....	227	.8
Cottonwood.....	219	.8
Elm.....	214	.8
Chestnut.....	214	.8
Cedar.....	208	.7
Beech.....	206	.7
Ash.....	152	.7
Sugar pine.....	107	.4
Western white pine.....	106	.4
Hickory.....	93	.3
Larch.....	67	.2
Tamarack.....	62	.2
Pupelo.....	35	.1
Balsam.....	34	.1
Walnut.....	28	.1
Mixed.....	467	1.7
Total.....	27,738	100.0

National Lumbermen.

The National Lumber Manufacturers' Association met at St. Louis, Mo., last week with a very large attendance. Several important matters were considered, among them being the adoption of a resolution appropriating \$150,000 for the establishment of the proposed chair of for-

estry at Yale University. Officers were elected for the association as follows: Messrs. William Irvine, Chippewa Falls, Wis., president; R. A. Long, Kansas City, Mo., vice-president; J. A. Freeman, St. Louis, Mo., treasurer, and George K. Smith, St. Louis, Mo., secretary.

The new board of governors is composed of William B. Stillwell, Savannah, Ga., representing the Georgia Interstate Saw-Mill Association; E. C. Fosburgh, Norfolk, Va., representing the North Carolina Pine Association; J. B. White, Kansas City, representing the Yellow Pine Manufacturers' Association; Edward Hines, Chicago, representing the Northern Pine Manufacturers' Association; William Wilms, Chicago, representing the hardwood manufacturers of the United States; E. G. Griggs, Tacoma, Wash., representing the Pacific Coast Lumber Manufacturers' Association; A. R. Week, Stevens Point, Wis., representing the Northwestern Hemlock Manufacturers' Association; J. A. Veness, Winlock, Wash., representing the Southwestern Washington Lumber Manufacturers' Association; George E. Foster, Mellen, Wis., representing the Wisconsin Hardwood Manufacturers' Association, and R. H. Downman, New Orleans, representing the Southern Cypress Manufacturers' Association.

The association voted to meet at Norfolk, Va., next year.

Big Timber Purchase.

Reports from Pittsburg, Pa., announce the purchase by the Flint, Erving & Stoner Company of that city of 10,000 acres of spruce and hemlock timber lands from E. V. Dunlevie of Dunlevie, W. Va. The transfer is said to involve a consideration of \$800,000, and includes, beside the timber property, the town of Dunlevie with its mills, electric-light and water systems, locomotive, railroad tracks, logging equipment, etc. It is estimated that the tract of timber will cut 200,000,000 feet, together with 60,000 cords each of round and slab pulp-wood. For the operation of these properties the company has been incorporated as the Flint, Erving & Stoner Lumber Co., with the following officers: J. B. Flint, president; A. W. Echart, vice-president and manager; E. H. Stoner, treasurer, and R. H. Erving, secretary.

Gulfport's Shipping.

Indicating the extent to which the long-leaf yellow pine of the South has taken the place of the white pine of the Northwest and other sections as an export lumber, a dispatch from Gulfport, Miss., contains figures which show that in 1903 but 13,436,723 feet of yellow-pine lumber were shipped from that port via the Gulf & Ship Island Railroad, while for the nine months ended March 31, 1906, shipments by the same road amounted to 170,121,000 feet. The source of this lumber is a belt of timber land 150 miles wide, extending across the State of Mississippi, and in the nine months referred to 202 steamers have cleared from Gulfport for foreign ports.

Wants Pine Rosin.

The Percival Wood Preserving Co. of Houston, Texas, is prepared to receive estimates on pine rosin.

Lumber Notes.

The schooner Harry K. Fooks arrived at Galveston, Texas, last week with a cargo of 625 mahogany logs from Laguna, Mexico, consigned to a Houston lumber company.

The Kirby Lumber Co. is sawing 500,000 feet of square timber at its Reliance mill for W. A. Powell & Co. and an additional cargo of 2,000,000 feet, all of which will be exported from Sabine, Texas.

MINING

Monazite-Mining in Carolina.

[Special Cor. Manufacturers' Record.]
Greenville, S. C., May 14.

Messrs. T. W. Miller, William Teague and D. E. Shade and associates of Joplin, Mo., who have been operating for monazite in Greenville county for several months past, have decided to market their ore on a larger scale and are erecting four mills to increase their product. Up until recently they have had but one mill with a capacity of 400 pounds a day. The four now being constructed will have capacity of about 1000 pounds each per day. The mills are equipped with inventions devised by those named. The latter are taking the sand from running streams and the surface of nearby bottom lands and are marketing the product in Greenville. They think the supply is very large and that it has a distinct advantage in that it is not necessary to mine for it. The operations are about seven miles from Piedmont, a station on the Columbia & Greenville line of the Southern Railway, and about 14 miles from Greenville.

JOHN WOOD.

North Carolina Talc.

The Croatan Company of Glendon, N. C., with main offices at Hartford, Conn., has recently been organized for the purpose of developing talc mines in Moore county, North Carolina. A modern mining plant to cost about \$100,000 is under construction at the Fair Promise talc mine, which is located about one mile from Glendon, near the Durham & Charlotte Railway. A short line of railway is also being constructed to facilitate operations, as well as a large dam for holding water. It is stated that the capacity of the plant will be about 50 tons of pulverized material per day. Officers of the company are Messrs. F. M. Peck of Hartford, Conn., president; D. P. Bible, Glendon, N. C., vice-president; R. M. Farmer, Hartford, Conn., secretary; N. D. Mercin, Hartford, Conn., treasurer, and J. C. Stockdon, Boston, Mass., superintendent.

West Virginia's Coal.

According to the twenty-third annual report of Mine Inspector James W. Paul of West Virginia on coal mines in that State for the year ending June 30, 1905, there were 696 commercial mines in the State operated by 364 companies, an increase over 1904 of 67 mines and 34 companies. The total production of coal from all mines was 31,503,029 long tons, while the coke manufactured amounted to 2,738,777 short tons. The increase in coal mined over 1904 is estimated at 4,518,314 tons and of coke manufactured 463,326 tons. The combined total value of both coal and coke put on the market is placed at \$31,080,408.77.

Betterments to Furnace.

The MANUFACTURERS' RECORD is advised that the receiver of the Chapman Iron, Coal & Coke Co., offices at 80 Broadway, New York city, will arrange for the resumption of operations at the Victoria furnace of the company at Goshen, Va., by relining the furnace, installing new boilers and making other improvements at a cost of \$35,000. The plant, which has a capacity of 160 tons of pig-iron per day, is in charge of Messrs. M. F. Bonzano, general manager, and E. B. Tenny, superintendent.

The Houston (Texas) Business League will issue soon a handsomely illustrated booklet calling attention to what Houston is as a railroad center and as a manufacturing and commercial point and suggesting opportunities for further development.

Cotton Manufacturers in Session at Asheville.

[Special Dispatch to Manufacturers' Record.]

Asheville, N. C., May 16.

An excellent attendance, a varied and interesting program of papers and addresses with entertainment between sessions in the form of drives through the Biltmore estate and to other of the many beautiful spots which give so great a charm to the Asheville region, and especially in these days of early spring, constituted the leading features of the tenth annual convention of the American Cotton Manufacturers' Association, which began a two days' session at the Kenilworth Inn this morning. There is a good representation of the nearly 600 members of the association, and, in addition, there are many supply men from all over the country, New England sending a large delegation, and there are representatives of many of the leading textile and industrial newspapers of the country, North and South. While some of the features of the program as at first arranged were unavoidably eliminated, there was no lack of material for a much diversified presentation of matters affecting the cotton industry in the various branches of growing, marketing and manufacture.

The principal omissions from the announced program were the address by United States Senator Henry Cabot Lodge, whose relations with pending legislation prevent him from leaving Washington at this time; the address of Col. Henry G. Hester, the veteran secretary of the New Orleans Cotton Exchange, who is confined to his home by a serious illness, and the presence of Mr. S. H. Carver of Alexandria, Egypt, who was down to speak on the cultivation of cotton in Lower Egypt. Mr. Carver had expected to be in America at this time, and would have been present in consequence. Not having been able to leave Alexandria, however, he found it necessary to be represented by proxy, and his interesting presentation of an interesting subject was forwarded to be read at the meeting.

It is stated by President R. M. Miller, Jr., that the dominant purpose of this convention will be a continuation of the effort inaugurated at the recent Washington conference of growers and spinners to bring the grower and the spinner into closer relation. This work, it is felt, was very auspiciously begun at the Washington meeting, and while it is recognized that it will require months and years to effect all that is hoped for, yet, coming so soon after the conference at Washington, it is felt that much can be done at this time to further the movement so promisingly stated at that meeting. Various technical subjects are included in the program, which give a variety to the meeting, and many of them are of permanent interest in importance. One of the subjects studied inside and out the convention is electricity for cotton mills derived from the water-powers of the South. In addition to the address on the subject by Mr. W. S. Lee, Jr., vice-president of the Southern Power Co. of Charlotte, N. C., whose company is engaged in the development of about 100,000 horse-power on the Catawba and other nearby rivers, there was a visit made by the members of the convention to the power development at Weavers Falls, near Asheville, and arrangements were made for a trip after the close of the convention to the work under way at Whitney, N. C., where the Whitney Company is well along with the development of about 76,000 horse-power.

An interesting undercurrent in the convention was apparent in the direction of bringing about closer relations between the American Cotton Manufacturers'

Association and the National Association of Cotton Manufacturers, the name to which the New England Cotton Manufacturers' Association has succeeded. In many quarters North and South it is felt that the aims and purposes of the two organizations are so closely allied that a consolidation in effect if not in form would be of mutual advantage. One suggestion heard is that the two organizations meet in annual convention, effecting for that purpose a federation, and that this meeting take the place of one of the two meetings held each year by the New England manufacturers, with the New England branch holding one meeting each year and the Southern Association holding one for the consideration of matters pertaining more intimately to their own affairs, and both then coming together for an annual meeting to be held alternately at some point in the heart of the cotton belt. It is declared there would be established a closer relationship and a more helpful co-operation than would be possible in any other manner. A matter of interest to come up Thursday will be the question of selecting a delegate or delegates to the forthcoming conference of the International Federation of Cotton Spinners, which meets in Bremen June 25. It is the talk that such a delegation will be decided on, and the names of Chas. Fish of New Hampshire and D. A. Tompkins of North Carolina are mentioned as likely to be voted for either one or both of them. The election of officers is another feature of Thursday's proceedings. There is a well-defined movement in favor of A. H. Lowe of Fitchburg, Mass., as the successor to President R. M. Miller, Jr. As the membership of the association covers the cotton-making section of the Union from New Hampshire to Texas, it is quite generally regarded as desirable that a New England man be chosen as the president of the association at this time. The retiring president has the satisfaction of reporting the record-breaking increase of 150 members during the past year. As a tribute to his services the association this morning presented Mr. Miller with a very handsome and elaborate chest of silver.

The program includes, besides the addresses of welcome on the part of Asheville by Mayor Alfred S. Barnard and on the part of the State by Governor R. B. Glenn, a reply by Mr. T. H. Rennie of the Graniteville Manufacturing Co., Graniteville, S. C., and the annual address by President R. M. Miller, Jr., the following papers: "The Evils to the Trade of the Present System of Government Cotton-Crop Reports," by W. J. Neale, president Southwestern Cotton Buyers' Association, Waco, Texas; "The Future Supply of American Cotton and Better Baling of the Same," by J. A. Taylor, president National Ginners' Association, Wynnewood, I. T.; "Relation of the Cotton Industry to Southern Development," by E. D. Smith, national organizer Southern Cotton Association, Columbia, S. C.; "Proper Accounting Methods," by F. W. Lafrentz, C. P. A., president American Audit Co., New York; "The Credit Problem Viewed from the Standpoint of Actual and Practical Utility," by P. S. Trevor, the Credit Office, New York; "The Metric System in the Cotton Trade," by Samuel S. Dale, *Textile World Record*, Boston, Mass.; "The Metric System in the Textile Industries," by W. W. Crosby, Brighton Mills, Passaic, N. J.; "Co-operation: Its Importance in Fire Prevention," by H. L. Phillips, manager Factory Insurance Association, Hartford, Conn.; "Recent Development in Air Conditioning," by S. W. Cramer, cotton-mill machinery, Charlotte, N.

C.; "Efficiency of Electric Drive in Cotton Mills," by Frank B. Perry, General Electric Co., Boston, Mass.; "Immigration and Its Relation to Labor Supply in Textile Mills," by M. V. Richards, land

and industrial agent Southern Railway Co., Washington, D. C.; "Electricity: The Power Behind the South," by W. S. Lee, Jr., vice-president Southern Power Co., Charlotte, N. C. ALBERT PHENIX.

ANNUAL ADDRESS OF PRESIDENT R. M. MILLER, JR.

It is remarkable and worthy of note that two interests so closely identified should have remained strangers for so long a time.

The history of the past, however, is that the planter has ever looked upon the spinner with suspicion and distrust. Prejudice has been engendered and nurtured; low-priced cotton has been charged to the manipulation and machination of the manufacturer; buy low and sell high, the planter says, has always been the shibboleth of the spinner. To the contrary, the spinner is not without his troubles and grievances; he has been oppressed at times by excessively high-priced cotton; by the utter disregard of the planter, as to the working of the universal laws of supply and demand, by an edict to advance the price to a prohibitory figure, thereby unsettling normal trade conditions and transforming the legitimate margin of profit of the manufacturer into an actual loss.

This long-pent-up feeling of antagonism is not real, but entirely imaginary, as undoubtedly the interest of the planter and spinner is mutual and dependent. Eliminate the one and you certainly eliminate the other; the relationship is reciprocal. Calculate, if you please, gentlemen, the value of your cotton-mill securities without the raw material, and let the planter at the same time calculate the value of his cotton without the consumptive demand of the cotton factory.

Grant, therefore, to the producer a fair and reasonable price for his product and to the manufacturer a fair and reasonable return on his invested capital, and a union of these common interests will enable the American spinner and the American producer of cotton to dictate to the world the price of the raw material and also the price of the manufactured product.

Let the producer remember that any policy or theory having for its aim an artificially high price for cotton is as disastrous in its consequences as a like policy on the part of the spinner having for its aim an abnormally low price—one extreme oppresses the manufacturer and the other bankrupts the producer, and both lead to a common and inevitable financial ruin.

Differences in the way are no doubt numerous, but surely not insurmountable. It is not the God-given nature of the American to stand still or go backward, but to press onward. Once show him his duty and he will never falter in its discharge.

Again, much is being said and written of late as to the cost of growing cotton, and this phase of the question was very interesting to our English friends during their recent journey through the cotton belt.

I believe that the day of five-cent and six-cent cotton is gone—gone because these figures are now below the cost to produce it; gone because the Southern cotton planter, holding the key to the situation, will demand a greater price; gone because the old theory that 10-cent and 12-cent cotton would curtail consumption has been exploded. Except for a short time during the season of 1903-1904, the past few years have seen reasonably high prices, and the large increase of spindles and consumption during this period is not, therefore, inconsistent with high-priced cotton.

Within the past 20 years our consumptive demand has increased very nearly 100 per cent., and this increase has not been checked, but, to the contrary, seems to

have been quickened of late by the high-priced raw material.

New mills continue to multiply, and especially is this true during the past year in Old England and the South. It is estimated that over 6,000,000 spindles have been installed in Old England, and possibly an equal number in America during the year; all of these, too, in the face of 10-cent to 12-cent cotton.

It is a truth universally conceded that the higher the price of a given commodity, the greater is the purchasing power of the country. High-priced raw materials usually bring high wages, and high wages means prosperity.

Again, our export trade is fast becoming an index to our prosperity in cotton manufacturing. We should insist upon a more liberal construction and interpretation of the present Chinese exclusion act. Congress should come to the rescue of the American cotton manufacturer in this matter.

I believe that it is necessary to adopt drastic measures to prohibit the importation of the "coolie" into our country; but open wide our doors to the reputable Chinese merchant, banker, student, educator, etc.

I also believe that such action can be taken without injustice to America and in all fairness to the Chinese.

Our export trade in cotton goods is only in its infancy, and just now prompt and decisive but liberal and conservative legislation on the part of our Congress would greatly strengthen the efforts now being made by our manufacturers for the expansion and further development of our foreign trade relations. Our country produces 80 per cent. of the raw cotton. Is it not possible that we should manufacture 80 per cent. of the finished product of the world? Protection to home industries should be blazoned from every mill tower in our country; and maintaining this principle, with unlimited capital, abundant raw material, perfect climatic conditions, etc., final and complete victory should come to us in the great struggle now being waged for this industrial and commercial supremacy.

Another matter of interest and to which a special committee gave attention during the year is that of crop reporting and estimates. My time will not permit of my going into the various phases of this subject.

We are unable, however, to report much progress to you along this line, our opinion being that the Secretary of Agriculture must call for some resignations in his department before any very efficient service can be rendered the country. We need cotton experts to handle cotton statistics and cotton conditions in the Department of Agriculture.

Upon the subject there is a wide divergence of opinion, and only by concert of action and harmony of all interests combined can we hope to accomplish any improvement in cotton estimates and crop conditions.

Suffice it to say, however, I do not feel that these reports should be abolished and leave us to the mercy of a few so-called statisticians whose sole purpose is to gather such information in order to manipulate the future contract market.

Another subject of great importance, more especially to our Southern members, is the pending bill now before Congress contemplating the preservation of our forests in the White and Appalachian range of mountains.

The effect of the denudation of the forests has been, thus far, to decrease the water-power of our country from 10 per cent. in some sections to 50 per cent. in others within the past few decades. All of you gentlemen who use water as a motive power in operating your mills will, I believe, bear me out in this statement. Let us urge upon our members of Congress the enactment of this bill. It is far less expensive now to protect and preserve these forests in their virgin growth than in after years to reforest them in order

to prevent floods, overflows, disasters, loss of life and property and final destruction of the great waterways and water-powers which are now the pride of our country.

The scientific cutting of timber creates wealth and at the same time protects the forests for future generations, while reckless destruction means loss to a vast number of our people and ruin to millions of invested capital.

I trust, gentlemen, that these matters to which I have called attention may be of interest to you.

ELECTRICITY: THE POWER BEHIND THE SOUTH.

By W. S. LEE, JR., Vice-President Southern Power Co., Charlotte, N. C.

If we should examine a railroad and industrial map of the South made 50 years ago we should find located along the ridges very few and short railroads. We should also find situated along streams a few cotton, woolen and other factories. In almost every case the articles manufactured were for local consumption and were furnished to the various large farms or plantations situated in the immediate vicinity. On the other hand, if we should examine railroad and industrial maps of New England for the same time, we should find the conditions reversed. New England having been a manufacturing country before the advent of railways, its water-powers were developed and factories located along the valleys. Consequently, when railroads were built in New England they were forced to follow the valleys, as the freight on the factory products furnished the principal source of revenue. As a result New England had the advantage of cheap motive power, while the South struggled along with the more expensive.

It is true that a few water-powers were developed for mill work, but being located away from the railroad, experience showed that these mills, although having cheap power, were at a great disadvantage, owing to the lack of transportation facilities, in competing with mills located on railroads.

Our engineers saw that it was necessary to bring the power interests and the railroad interests together, and have been wrestling with this problem since the beginning of the manufacturing era. The railroads could not be moved from the ridges to the valleys, neither did the business warrant the expenditure necessary to build another system of railroads along the streams. The alternating-current generator and transformer came to their assistance and opened up the way. By the generation of electrical power on our streams and its easy transmission over long distance by wire cheap power with good railroad facilities can be placed at the disposal of every manufacturer. While our progress has been greatly delayed on account of these topographical and railroad conditions, we are today in a position to derive more benefit from our resources in many cases than if our streams had been developed in the days of direct drive. The manufacturer is able to locate factories on high ground, thus obtaining the advantages of better light, healthier and more convenient surroundings, while if the direct drive were used factories would have to be placed in valleys near water-powers, where they would be in many cases cramped for room and often-times located on unhealthy ground.

The solution of the problem of transportation and power interests immediately created a prosperous condition in the South. Our agricultural and manufacturing statistics show that we are not only large producers of raw cotton, but that we are fast becoming a cotton-manufacturing center of the world. This gratifying advance in Southern wealth since the beginning of this century is immediately connected with the betterment of the cotton

situation. This wealth, as shown by increased assessment of property, amounts to over one and one-third billion dollars.

Considering that the valuation of the cotton crop for 1904-1905 amounted to \$685,000,000, and that all the other crops amounted to not more than \$1,123,000,000, that is, the cotton crop is worth more than one-half the value of all the other crops, we see that something like 40 per cent. of this one and one-third billion of increased valuation is due to our increased cotton crop. But of the 13,566,000 bales that the South has grown, our spinners have taken 2,116,318 bales, against 2,193,937 bales taken by the Northern spinners. Considering the fact that 10 years ago the Southern mills consumed less than half as much as the Northern mills, it is very encouraging to note that we are almost on a par with the North, and the advantages which the South possesses are good reasons for believing that the South will in a very short time be spinning the greater part of its cotton crop instead of sending it to the North and abroad for manufacture.

We might sum up these advantages under the following heads:

Raw Material.—Mills located in the South are enabled to secure their raw material almost at their doors, and it will be many years before any State manufactures as much cotton as it produces. This, of course, reduces freight rates to a minimum.

Transportation.—The various railway and steamship lines radiating to every part of the world enable the Southern mills to offer their goods in all markets. The completion of the Panama canal will afford still further advantages in transporting our goods to the Orient.

Help and Health.—Although help has been somewhat scarce, due to the very rapid development of mills, nevertheless the South is building yearly a great number of mills and securing help for same. The help of the South is fast becoming more expert, consequently the same number of hands are annually producing more goods. The healthy location of the cotton districts of the South is drawing more and better help into the cotton-mill district every year.

Motive Power.—The South's greatest asset and advantage consists in its numerous water-powers situated throughout the cotton-producing and cotton-manufacturing district. The South has something like 2,000,000 horse-power still to be developed in the very heart of the cotton field, and in a climate where ice cannot materially affect this development.

It seems strange that this enormous power should have lain dormant in the midst of our factories while they were producing power by steam at a great cost. It would seem that the energy of these water-powers was destined to lie dormant until conditions arose in which all factors would work in unison for maximum advantage, and that the South would then proclaim that it had become the manufacturer of cotton goods for the world.

It is very evident that centralization of power is profitable to a producer and

necessary if he is going to compete with other States and countries, and it cannot matter to him whether the power is generated in his own plant or purchased from another as long as it is obtained cheaply; in fact, the ideal plan would be to buy the power from an independent concern, inasmuch as the factory manager can then devote his entire time to increasing the output of the factory instead of endeavoring to keep down the cost of power in his own plant.

In the foregoing paper we have endeavored to show first the railroad and topographical condition which influenced the power development of the South. We have also considered an agricultural and manufacturing development which demanded electrical development in the South. We have also shown some of the features and advantages of the electrical drive, and before closing this paper wish to consider the financial effect of developing our water-powers by the use of electricity. In order to see just what financial effect this could have on the South, we should

	January.	February.	March.	April.
Total output in kilowatt hours.....	143,800	120,400	245,200	275,000
Cost of coal consumed.....	\$1430.18	\$1142.62	\$1727.16	\$1868.25
Cost of coal consumed per kilowatt.....	.0099	.0094	.0070	.0067
Cost of oils and waste.....	92.09	55.65	100.14	106.64
Cost of oils and waste per kilowatt.....	.0006	.0007	.0004	.0003
Cost of repairs.....	14.88	25.08	50.02	50.38
Cost of repairs per kilowatt.....	.0001	.0002	.0003	.0002
Cost of labor.....	284.39	266.50	291.73	293.44
Cost of labor per kilowatt.....	.0020	.0022	.0011	.0010
Cost of interest and depreciation per kilowatt.....	1250.00	1250.00	1250.00	1250.00
Total cost per kilowatt.....	.0087	.0105	.0065	.0048
Total cost per kilowatt.....	.0213	.0230	.0143	.0130
Cost per horse-power per annum.....	53.25	57.50	35.75	32.50
Total cost per month.....	3072.08	2769.85	3419.06	3567.71

look somewhat into the relative cost of power generated by steam and cost of electrical power that is offered for sale by the various water-power companies throughout the South.

In discussing the comparative costs we know of no better method than to submit for your consideration actual cost of electric power now being generated by steam in the substation of the Southern Power Co. at Charlotte, N. C. The plant in question consists of a 1500-kilowatt generator direct connected to a 2000-horse-power compound condensing engine with economizers, superheaters, modern and up to date in every respect. The cost of this plant was approximately \$150,000, and in figuring cost of horse-power we have estimated interest at 6 per cent. and depreciation at 4 per cent. The other items are exact cost as taken from books

of the company for the various months.

(11-hour service, 6 days in the week—approximately constant load).

It will be noted that no charge for superintendence or clerical work has been made; also that this plant did not run at full capacity during the months in question, but was used as an auxiliary plant in connection with the water-power development.

It will be seen that the average integrated horse-power ranges from approximately 700 to approximately 1500 horse-power monthly, and that cost per horse-power per year on these results will amount to from \$52 to \$32. The lowest rate per kilowatt hour for any month's output so far has been 1.3 cents per kilowatt hour. The Southern Power Co., as well as many other water-power companies in the South, are selling electric energy at the rate of 8 cents per kilowatt hour, or \$20 per horse-power per annum.

While the above are results from a large plant, we all know that in many of the smaller plants generating from 250 to 500

horse-power the power is costing from 50 per cent. to 100 per cent. more than the above cost.

We can safely say that the development of this mighty agent, which is such an important factor in developing one of the greatest manufacturing centers of the world, will certainly save each and every consumer at least \$5 to \$10 per horse-power per annum on each horse-power consumed.

When we consider the amount of power to be developed and the enormous saving by the utilization of this power, we can see at once what a wonderful effect this immense production of wealth will have on the South.

In concluding, we cannot but insist that with its advantages, adaptability, the great saving, this mighty and mysterious agent is truly the power behind the South.

FUTURE SUPPLY AND BETTER BALING.

By J. A. TAYLOR, President National Ginners' Association.

I think my subject, at least in part, is the most important one the spinners of American cotton have got to consider in the next few years, and I think we should not wait till we have a famine in the cotton world before taking steps to increase the supply up to the demand.

If the world's consumption of American cotton increases in the next few years as in the past, will we be able to supply the demand at present prices? I think not. From September 1, 1893, to September 1, 1898, the world's consumption was 44,902,350 bales, or an average of 8,980,470 bales annually, at an average price of about 6 cents per pound on the farm. From September 1, 1898, to September 1, 1903, the consumption was 53,420,732 bales, or an average of 10,684,146 annually, at an average price of about 9 cents per pound on the farm. If the consumption increases at the same ratio during the next five-year period to September 1, 1908, the world will need 63,565,670 bales, or an average of 12,713,134 bales annually. During the first three years of this period we have produced about 34,500,000, and if we supply the demand will have to produce 29,000,000, or 14,500,000 annually. The figures on consumption in the two first periods are taken from a report gotten out by Secretary Hester and myself

at the first meeting of the Southern Cotton Association at New Orleans, and cannot well be disputed. The consumption during the last period was even greater than this, as the invisible supply of cotton was very much greater at the beginning of the five years than at the end. The supply of cotton fabrics was also very much greater at the beginning than at the end of the period.

I have recently made a trip over the entire belt and have carefully investigated the cost of growing cotton in the various sections, and have arrived at the following conclusions: In the black-land belt of Texas and in the Mississippi Delta the cost is about 7¼ cents with an average crop. In the boll-weevil district it is about 10 cents on an average, although the last year it was not so much, as the weevils were scarce in the early part of the season, due to the cold winter of 1904-1905. In the eastern part of the belt the cost of growing is some less, owing to the cheaper labor and good crops for the past two seasons. I think the cost of growing the present crop will be larger in nearly every section of the belt.

At the present rate of advance of the boll-weevil across the belt he will be in the Mississippi Delta this year, and in the Atlantic States in 10 years. They

have nearly reached the Red river on the north of Texas, and have crossed it in Louisiana. As the climatic conditions are very much more favorable in the central and eastern part of the belt, they will evidently do much more damage than in Texas. Where the weevil's invade a section the yield is decreased by at least one-half, and some years much more. In order to successfully combat the weevil and grow cotton at all, the experts of the Department of Agriculture say that rotation in crops must be practiced, so that this will reduce the acreage at least one-half, as the percentage of other crops have been very small in the southern part of the belt. By doing this and giving extra good cultivation, about a half-crop can be grown, although some seasons it runs below that.

Up to this time nothing has been found to kill the weevils without injuring the plant. The governor of Texas offered \$50,000 for any plan to successfully exterminate the weevil, and yet no one found a plan. The Department of Agriculture has expended many thousands of dollars and have failed to kill them out. At the end of 1908 the weevils will cover about 50 per cent. of the belt, which will mean a reduction of at least 25 per cent. in the yield, and perhaps even more.

Now, a few words as to the labor situation in the South, which is the most serious problem the planters have to solve in the central and eastern part of the belt. The demand for labor in the cities, in cotton mills, lumber mills, on the railroads and various other industries, many of which are comparatively new in the South, has increased so much in the last few years that labor is getting very scarce on the plantations, notwithstanding wages have been advanced nearly 100 per cent. in the last 10 years.

If the consumption increased 20 per cent. during five years and the price advanced 50 per cent., and yet only increased the supply about 1,500,000 bales annually, it seems that the price will have to go very much higher to increase the supply to the world's need, or the demand will have to decrease to the supply, which will cause an advance to a point which will increase the planting very materially. In the spring of 1904 the price of cotton advanced about 7 cents per pound, but as the price was fictitious cotton goods did not follow up, as the people were not accustomed to higher prices. Now, with the price about 6 cents lower, the price of cotton goods in most all lines are even higher than then, leaving a very handsome profit to the spinner. To what price will cotton have to advance to cut down consumption very materially? No one knows, as it takes an advance of 6 cents in raw cotton to add one cent to the cost of producing most lines of cotton goods, and even the heavier goods have to be used, as there is no cheaper substitute that is practical except in a very limited way. Will our wives and daughters use any less dresses if the price were increased 10 cents per dress? No, I hardly think so; in fact, it is on the increase, as the number of yards in goods in the average woman's wardrobe is about double what it was 10 years ago.

Now that we have looked ahead to find out what will be the probable supply of American cotton if the present prices prevail, what is best for the spinners to do to increase the supply to the world's demand? Is it better to fight the advance and hold down the acreage and in the next year or so bring on another famine in cotton and have the price advanced by speculators to a point that the spinners cannot make a profit, or to gradually increase the price of cotton goods and raw cotton so that the acreage will be increased to a point that a normal supply will be produced? I should say that the latter would

be much the better for the spinner in the end.

Don't think because the South produced nearly 14,000,000 bales in 1904 that they are likely to do it again soon. The weather conditions that season were nearly perfect the whole year all over the belt, and we only have one of these seasons about every five to seven years. Is it likely that we will produce more than an average crop this season? The acreage will be at least 7 to 10 per cent. less than in 1904, and with the weevils over at least 50 per cent. more territory and in greater numbers than ever was known before at this season of the year, it is likely that we will raise less than an average, and with conditions as bad as they were last year we would have such a cotton famine as the world has not seen since the Civil War.

Even with a crop of 11,500,000 there would not be enough to supply the demand, for notwithstanding the world's consumption has been about 1,100,000 per month since November 1, 1904, the supply of cotton goods is scarcer than ever before, and I understand the mills are sold much further ahead than ever before in the history of the trade. Is it likely that trade conditions will decrease with the world at peace and not even a cloud on the political horizon of the world's affairs to indicate the possibility of another war? With China and Africa (with their teeming millions very scantily clad) being opened to the world's trade and civilization, which require the wearing of more clothes than they are at present wearing, I rather think the next two years will show the

largest increased demand for cotton goods we have ever had.

The present method of baling our cotton was called to my attention by a committee of English spinners sent to this country to study conditions over here. One of the gentlemen was here about 20 years ago, and remarked that notwithstanding we had made wonderful strides in almost every direction, we were still putting up our cotton in the same old way, which, from the spinner's standpoint, is very poor, as they say our cotton is very much superior to the other cottons they use, yet the package and the way it is put up and handled is very much behind other countries.

In order to bring about better baling of our cotton I would suggest that a committee of spinners, planters and ginners be selected to inspect the presses used in various sections of the world, ascertain the best kind of bagging and ties to use, and report to the different associations interested in the matter so that steps can be taken to bring about a change to the most desirable package and bagging. It will take some years to completely change the present system, but we should begin at once. New gins are being built every year and new machinery installed in old plants, so that in a few years the change could be brought about and no one be seriously damaged.

We all know that if our present style of baling is causing our cotton to be discriminated against, it really comes off the producer, and the quicker it is remedied the better it will be for them.

THE METRIC SYSTEM IN THE COTTON TRADE.

By SAMUEL S. DALE, Editor *Textile World Record*, Boston, Mass.

All textile calculations may be divided into three classes. The first includes by far the greater number, and can be made with equal facility by either the English or the metric system; the second includes those for which the vulgar fractions, allowed by the English system, offer an advantage; the third consists of those that are simplified by a decimal system of numbering yarn. It is for the calculations of the third class that the metric system offers an advantage by reason of the system of numbering yarn by 1000 meters per kilogram. How important that advantage is may be estimated from the fact that this decimal yarn count is the one feature that Continental Europe has steadily refused to adopt. Today, 114 years after the metric system was established, there is not a woolen, linen or silk manufacturer in France who is not a persistent and defiant lawbreaker rather than use the metric yarn count, and the only thing that saves the French cotton manufacturers from the same stigma is that in 1819 their predecessors forced the government of Louis XVIII to repeal the "metric yarn statute as far as it applied to cotton and give them a system based on the livre, or pound. And yet, in the face of these facts, these Continental lawbreakers come to English-speaking countries and ask us to adopt the metric system because it will save us so much time in making our textile calculations.

The highest merit of any system of weights and measures is the extent to which it is used. A system of weights and measures superior to either the English or the metric might easily be devised, but it would be worthless as a standard until it had been adopted. While the English system is better adapted to textile work than is the metric, the difference would be entitled to no consideration as compared with the advantage of the more extensive use of one or the other. Thus it is on the extent to which it is employed that any system must rely for its claim to further adoption.

Now, I want you to rid your minds of all the unproven statements you have heard about the wide use of the metric system throughout the world. This will bring us down to what we know or have good reason to believe. How does the English system stand this test? We know what we have in America. We know that the entire cotton industry of America, from the time the fertilizer is scattered over the cotton field until the goods are made up and sold to the consumer, is based on the English yard, inch, pound, ounce, grain and 840-yard skein. This system prevails throughout the British empire, where it is, as with us, a part of the general system of weights and measures. The boundaries of English-speaking countries, however, do not mark the limits of the use of the English weights and measures for cotton. Take, for example, the English system of cotton-yarn counts. There is but one country on earth—France—in which it is not supreme, and in France the metric count is not used.

A new tariff recently went into effect in Germany. Years were devoted to its preparation with characteristic German thoroughness, and the cotton-yarn schedule was deliberately based on the English system of yarn counts. The same thing has been done in Austria, Russia and Spain. In Asia the only cotton standard worth mentioning is the English.

The metric system created by the arbitrary decree of Robespierre has always depended on force for its extension. Proof that the English system is the cotton standard of the world could be given indefinitely, but surely we need spend no more time in demonstrating this self-evident fact.

So far our examination of the metric system in the cotton trade has shown its units to be badly suited for textile work; its names impossible; the claim for a saving in calculations by it to be false, and its use as an international standard a myth. On the other hand, we find our English system to be well suited for cot-

ton manufacturing; the names of the unit short, distinct and businesslike; cotton calculations by it simple and direct, and the system established as the single cotton standard of the world. In a word, the English system is better than the metric. Moreover, we find a complete change of established weights and measures to be hopelessly impossible, and that a partial change leads to indescribable confusion.

It is to the danger of this partial change that I invite your attention. The metric system can be forced by law into many branches of trade and commerce, destroying our present priceless uniformity and causing the chaos of incommensurable standards that now exist in Continental Europe. The danger of such a calamity arises from the indifference of the people that would suffer the most. They are too busy earning a living by the yard and the pound to consider seriously any proposition to change those standards. This indifference has been the opportunity of the metric agitators. For years they have spread their fallacies abroad, holding up the metric weights and measures as the only perfect and scientific system that ever has been or can be devised, the only system that is certain to become universal. At the same time they have denounced the English system in unmeasured terms as a system that "is in harmony with that of no other nation of the world;" that it "makes us more barbarians to the more progressive nations," and that it is "an ugly excrescence on the world's literature and practical arts." They have worked their way into government bureaus and used the executive power to further their plans. They have clamored for change at the halls of Congress and succeeded in winning many unthinking legislators to support their fallacies. It is but a few weeks ago that a chief of a government bureau, the sworn custodian of our fundamental standards of weights and measures, appeared in the rooms of the House committee on coinage, weights and measures and denounced our English system as "not worth a damn."

Surely that should mark the utmost limit to the metric agitation in this country. It should awaken the people to the danger that threatens the existing uniformity of weights and measures, a danger that arises wholly from popular indifference. So long as theorists are allowed to curse the English system at Washington without protest from you, just so long will unthinking legislators be led to support compulsory metric legislation. It needs but a popular order, Hands off! to put an end to the agitation forever. In face of such a command from the men who use weights and measures in doing the work of the world the appeals of theorists with nothing at stake will be of no avail.

Today the attack on our established standards take the form of a bill to make the use of the metric system compulsory in the departments of the government. All sorts of specious arguments are advanced to conceive the real intent of the measure. That intent, however, cannot be hidden. For 40 years the use of the metric system has been permissive by the government and the people, and yet its use has not increased proportionally. Any further legislation in its favor should, therefore, meet with uncompromising opposition as being an attempt to force on the people a system of weights and measures that cannot win on its merits. To metric agitators the answer should be: "There is the law of 1866, making the use of the metric system permissive. Now go and use it if you want to, but don't try to make us use it if we don't want to."

There is no more important work before the cotton trade than the defense of established standards. There is probably none that receives less attention. It is not

merely a national question; it is international in the broadest sense of the term. Today our cotton standards are the standards of every country on earth except France. The defense of our standards is the defense of the world's standards, and

IMMIGRATION AND TEXTILE LABOR.

By M. V. RICHARDS, Land and Industrial Agent, Southern Railway.

In the matter of immigration, as in the matter of industries for the South, I have little or nothing to offer that is striking or original. On occasions similar to this I may have impressed my listeners—as I may in this instance—with the poverty of new material, in the way of suggestion, that I have to offer.

My concern always has been and is now to see the right kind of start made; the rest is easy. When things begin to come your way the tension is relaxed, and presently things move along through sheer weight of their own momentum. If a factory is started at some point where industry had hitherto lagged, and it proves a success, in 90 cases out of 100 it will find imitators, and thus the procession is started. If a rural community receives an accession of foreign immigrants who prove to be successful, I cease to worry about that place, knowing there is a soliciting force at work with friends and relations back where they came from who may confidently be relied upon to come along, as they are able, and swell the number of agricultural workers so sorely needed.

It is the homemaking in the South, now becoming apparent to the eye, visible along the country highways and from the car windows of passing trains, that is exerting the strongest influence in settling the South, and in the settlement of the rural districts lies, to my mind, the solution of the labor problem for our textile mills. Now this is simply a reiteration of an old position in which I am by no means alone. Settle up your farms, cut your farms into smaller areas, and your labor problem in the mills will be quickly adjusted. Your mills will continue then as formerly to draw their chief labor support from the farming districts. In every city and town in the South there are plenty of men who could promote immigration just as effectively and in substantially the same way that they have promoted industrial development. Every family from outside, satisfactorily and contentedly placed, is so much capital invested in your section; more valuable and potent than capital in the form of money invested in factories, which, of course, I do not mean to depreciate.

Apparently many cities and towns capable of raising large sums of money for local industries fail to realize the interdependence of town and country; they fail to realize that to insure prosperity for their towns their tributary country shall be promoted with equal energy and skill. The capital required for country districts is men—working people. Some of the overcrowded countries of Europe are filled with the right kind of people, anxious for an opportunity to start life anew in this country, while all over the South, adjacent to busy cities and towns, are thousands of acres of idle lands, or, at best, lands only partially used, which would fit out enough people with homes to revolutionize conditions as much or more in the country as we have witnessed in the cities and towns since the inauguration of the new industrial era. Half a dozen farmers of the right sort are of as much value to a town as a small factory; they are of more ultimate value if they are selected with reference to the influence they will have in bringing others in their wake.

Large immigration movements come by graduations and through cumulative efforts, each successful immigrant being so

there could be no more fitting place from which to issue the order, no meddling by theorists with the established standards of the cotton trade, than here in the South, where nature has placed the cotton fields for mankind forever.

much leverage on another. The exception to this rule, with which we are all more or less familiar, and which has been practically brought to a final termination through the exhaustion of the supply of public lands available for entry—the rushing of masses into sections of the far West for homesteading—has generally brought more disappointment than success to the earlier participants. Such methods are, of course, not practicable in the South even if they were desirable. To my mind the feasible rational plan for the South to pursue is to simply stimulate the present practice of locating small nuclei of settlers at as many points as possible, and let the leaven do its work.

We hear a great deal about the desirability of this race and the undesirability of some other race in this discussion of immigration, and the apprehension is frequently expressed that the South is in danger of becoming the victim of invasion by menacing hordes of foreigners. My own opinion is that no race of people has a monopoly of all the virtues. There are good and bad among all peoples, and it is at least singular that the race from what the most is feared (the Italian) appears, as far as his performance can be measured by the criminal records of our large cities, to have been the least dangerous and harmful element of our population, while elements of foreign population which we could greet without question have contributed in much larger proportion to the crime and disorder of the country. However, I am not here to advocate the merits and virtues of any particular race of people; I simply want to point out how easy, where communities differ on the question of race desirability, it is to put in practice a form of "local option" applied to immigration. In parts of this State and in South Carolina the foundation stock is Scotch, and the opinion is strongly held that this original element ought to be reinforced from Scotland. Nobody can quarrel with that idea.

In selecting my own subject for discussion, "Immigration and Its Relation to Labor in Textile Mills," not unmindful of your committee's admirable repertoire of pertinent and practical subjects for discussion before such a representative audience, I am even now, with your committee's permission, somewhat in the position of Oliver Wendell Holmes, who on one occasion before an audience of his countrymen said: "Gentlemen, I'll just paraphrase my subject for the milk in the cocoanut," and treat my discussion under the more prolific and pertinent head of "The Textile Mills of the South and Their Relation to the Promotion and Furtherance of the Supporting and Uplifting of the Country By and Through the Channels of Immigration."

It is not only the want of labor that confronts the textile mill—labor in the factory—but a rejuvenation and reinforcement of the neighboring rural population. I would change the "want ad." for labor to one for homeseekers. Fill your country with homeseekers on small farms, and you have not only assured your labor supply, but vastly increased the tributary supply of material for your factories. When considering the matter of another factory or mill for your town, frankly look over the situation and see if it does not occur to you that more might be done for the town indirectly by doing something directly for the surrounding country, on which the

prosperity of your town is primarily based. Is it not apparent to us all, when we stop to think about it, that we are in position to correct this one-sided development so apparent in many sections of the South, and that the textile-mill men, as business men of approved judgment, should take the initiative in the movement for relief? Of course, the exigencies of the moment have to be considered by the man or corpora-

COTTON INDUSTRY AND SOUTHERN DEVELOPMENT.

By E. D. SMITH, General Agent Southern Cotton Association.

There is no industry whose history and development has been as intimately interwoven with the history of the people and country where it is produced and developed as the history of the cotton industry to the South. Previous to the war the recognized commercial value of cotton had been established. When that terrible struggle ended the South was left stripped of her capital and credit. Thrown suddenly and unpreparedly into new conditions, she had but one resource, but one basis of credit, which was the demand of the commercial world for this, her great product.

It is a strange paradox, but it is true, that during this dark period cotton was the one hope of the commercial and industrial South, and became really the basis upon which her commerce and development was ultimately to depend. But, at the same time, it was the means of keeping her for long years in comparative ignorance and poverty. No country, perhaps, in modern times has been left by the fortunes of war in as helpless condition as the South was, cotton being, as said before, the one product of which she had a practical monopoly, which was acceptable to the world as a basis of credit. It was accepted by the North and the European countries as a basis upon which loans might be negotiated to start us once again in the business world. The Northern banker, not having had his capital impaired, loaned to the Southern banker, and the Southern banker in turn loaned to the Southern merchant, and the Southern merchant to the Southern farmer. These loans were made payable as soon as the commodity upon which they were based was ready for market. Thus it was that in the first three fall months the Northern banker called the Southern banker, the Southern banker the Southern merchant, the Southern merchant the Southern farmer, and the Southern farmer, to meet his obligations, placed his cotton upon the market as rapidly as it was gathered, without regard to price.

It did not take long for the shrewd manipulators, speculators and gamblers to realize the peculiar Southern condition and to take advantage of it. Recognizing the great intrinsic value of cotton and the poverty of the South, and knowing also that under these conditions the entire crop, so far as the South was concerned, had been practically pledged for its debt before ever a seed was planted, and knowing also that it must be placed upon the market at the time when these debts became due, took advantage of this condition to manipulate the market to their advantage and enrichment and to the impoverishment of the South. Hence it was that cotton became at once the means of our existence and our continued poverty.

It was not because the South and the world as well did not recognize the fact that the price paid was not commensurate with the value of the article to the purchasing world, but because the South was unable to live and demand at the same time an adequate return for this, her great monopoly. But gradually she began to adjust herself to new conditions, to systematize as far as possible her method of living, to handle more intelligently her undeveloped resources, and to

tion whose spindles or looms are idle for want of labor; the pressing need of the moment cannot be ignored, and the employer cannot be blamed for looking for mill labor rather than purchasers for farms, but while doing this he can also employ his means and his influence to advantage in helping to build up the permanent source of his labor and his supplies—the contiguous country.

supplement, as far as possible, her supplies with home-grown articles.

At the same time the world's demand for cotton was increasing; the methods of manufacturing were being improved, and the hope was kept alive that some day the South would be in a position to so control her crop as to get an adequate return for it and to obtain thereby sufficient to develop her other resources, and to make herself master of the cotton industry of the world and independent of the world for the commodities which she was forced, in her hour of poverty, to be dependent upon. I am happy to state to this body of distinguished men that that hour has arrived.

And at last the South has come to a full realization of her tremendous power in the commercial world through this, her practical monopoly of the world's necessity. And the time is not far distant when in the course of the operation of natural law there shall be poured into the South, as a return for her cotton crop, sufficient capital to enable her to develop her wonderful water-power, and on Southern soil, with Southern capital, not only to produce the raw material, but to convert every pound of that raw material into the finished article. And with the greatly-enhanced profit that shall come to her through this advanced step, to develop other vast but untouched resources.

There are few who recognize, even among Southern people themselves, the marvelous commercial value of the cotton plant. From root to flowered tip it is of commercial value. Aside from the value of its lint, the seed are rapidly coming in as great demand as the fiber itself. From the seed in turn are derived three products, all of which are becoming staple products in the markets of the world—the oil, the meal and the hulls. The stalk, which is left in the field, is of great commercial value in returning to the soil which produces it a liberal share of that which it has borrowed at an interest besides in the form of additional ammonia.

It is a wonderful plant, and its product is the currency of the South.

Cotton is essentially Southern currency—her gold and silver and greenback. The volume of her trade is dependent upon the amount of currency realized from the sale of her cotton crop. Under the law of the transformation of energy it must ever be the means of realizing the hopes and aspirations of a great people. Into the production of this, our one monopoly of a world's necessity, we pour our brain and energy and capital. And out of it we ought to realize an enriched, educated, refined and progressive people.

I do not wish to appear selfish or narrow, but I long to see the day, and faithfully expect to see it, when every fall in the great Piedmont of the Carolinas and in the hill countries of the South, in conjunction with steam and electricity, shall give profitable employment to thousands now idle, enriching the world, and in turn enriching herself; when this band of heroic Southern pioneers, having faith in themselves and in their country, having already grown into a recognized power, shall become a host and fill the Southland with the commercial music of the engine and whirl of the dynamo.

In the field of textile industry the South need not fear competition. We need no legal enactment, national or State, to protect us. When God created the earth, marked the bounds of soil and climate, He threw about the South a tariff wall as eternal as His everlasting law. And

CO-OPERATION IN FIRE PREVENTION.

By H. L. PHILLIPS, Hartford, Conn.

A certain relationship is established between the insurer and the insured by the issuance of the policy contract. On the face of it such a contract involves, briefly, merely the payment of a fixed sum on the part of the assured, in return for which the insurance company guarantees indemnity for loss by fire under printed conditions.

What the contracting parties owe each other in order that a purely business relationship may be established and continued is stated in the contract, but beyond this there is a moral obligation which each one owes the other, and it is this obligation which has occurred to me as being a subject fit for a brief discussion and explanation.

Aside from the stipulations of the policy the companies owe the assured information and knowledge which they obtain as the result of the experience of paying losses. About all that the companies do receive in return for the money expended in losses is experience, and this is obtained at a very dear cost. Where the companies find that a fire occurs and the loss is occasioned because of some feature of inferior construction or undesirable occupancy, or the existence of some well-known hazard, it is their duty to point out those features to the insuring public, and the insured owes it to the companies, when rebuilding, to adopt such changes as are found to have been necessary as a result of an experience by fire. In this manner the companies are fulfilling an obligation which they owe the policy-holders.

In addition to recommending improved construction, they suggest the introduction of fire-protection apparatus, and they owe it to their policy-holders to give them complete information on this subject, to the end that the risk may be made safer from fire and the chances for a business being interrupted thus very greatly reduced. Next the companies owe it to their clients to advise them in regard to the care of the fire protection and the elimination of fire hazards, and for this purpose they maintain regular inspections by specially-trained men involving a very heavy cost, in order that the equipment which is installed may be maintained to the highest degree of efficiency and perform its duty when called upon.

But no matter how much the companies may do themselves, how much money they may spend, how many good suggestions they may offer, the results will not be successful unless there be a reciprocal attitude on the part of the assured.

The property may have been built of the very best type, the fire-protection equipment may have been installed according to the latest rules, the inspector for the insurance companies may have been there and ascertained that the water supplies were in condition and the valves open, yet the very next day a lack of attention on the part of the owner or neglect to properly maintain the equipment may be the means for the total destruction of the plant because the fire apparatus has failed owing to the simple matter of a valve being closed carelessly.

The most important element in co-operation in the care of a risk is the maintenance of the fire-protection system. The installation of an up-to-date and complete fire-protective equipment involves the expenditure of a large sum of money, and

through bitterness and a fearful experience we have learned the value of this divine gift. Yet in righteousness and temperance, without malice or retributed justice, will we clothe the world, feed the world, shoe the world, while we maintain our own financial, social and commercial supremacy.

this investment should be watched just as carefully as any other dividend-paying investment which a manufacturer may make.

It is, of course, essential and wise to prevent fires so far as possible, but it is more important that means shall be at hand for extinguishing fire when once they start. In other words, let us make an effort to extinguish a fire by means of the one element which will put it out, i. e., water, rather than to attempt to prevent a fire from starting in the thousand and one ways which are possible.

In connection with the maintenance of a fire-protection system the insurance authorities have themselves assumed the expense involved by a quarterly examination of risks by trained inspectors. This has been found to be the most frequent that the companies can afford to make the inspections, and yet, of course, the possibility exists that a few minutes after an inspector leaves the risk the equipment may be put out of commission until the next quarterly examination, when the defect is discovered.

Among all the ordinary hazards found in every class of manufacture, probably the one which increases the fire loss to the greatest degree is that of neglect of cleanliness, and yet this is the one hazard which is most apparent and most susceptible of treatment of any of the dangers which exist.

There is no good reason for finding a manufacturing property neglected and dirty. In some cases it is a lack of help, which can be remedied; in others it results from "falling into a rut," which should be remedied, and still more often it is a case of absolute neglect on the part of the one in charge, which must be remedied in order to obtain safe conditions.

It is apparent also that a fire starting from whatever cause it may, be it near the ceiling or on the floor, will spread much more rapidly if there is more or less light fluffy material than if the surfaces are swept clean. Such a minor matter as lint on the electric-light drop is a feature that should have careful attention, with the possibility of a short circuit always existing and the lint ready to spread the fire to a dangerous point like the fuse in a blast.

In spite of the fact that I am not a manufacturer, I venture to make the statement, in which all of you will agree, that the product obtained in a clean mill is far more satisfactory than that in a mill where the cleanliness is neglected; so in urging this most important feature the favorable results obtained by extreme care have an effect further than advancing the selfish interests of the insurer.

The best co-operation will not always prevent fires, but when a fire does occur, and after it is extinguished, there is still opportunity for co-operation. That a fire wreck should not be touched until a representative of the insurance authorities has arrived, or, as it were, to await the arrival of a coroner, is a great fallacy; in fact, the policy requires that the property shall be properly cared for and not abandoned.

It is not necessary for me to dwell upon the statement that greater salvage can be obtained from prompt handling of stock or machinery damaged by smoke, fire or water than to permit it to lay 24 or 48 hours without giving it any attention.

The policy-holder should adopt every possible means at his command to keep the loss down to a minimum. The companies are very willing to pay full damage caused by the fire itself, but it is not according them proper treatment to allow the stock or machinery to become further injured because of neglect in promptly and properly caring for it.

The Iron and Metal Trades.

The *Iron Age* in its weekly review says: "The most striking news of the week is that coming from Chicago relating to steel rails for 1907. It is stated that the total new tonnage for 1907 thus far booked foots up to 562,000 tons, this including contracts placed by the Great Northern, Northern Pacific, St. Paul, Burlington, Illinois Central and Wisconsin Central. It is estimated that the Illinois Steel Co. will have to carry over from this year to next about 80,000 tons. The pressure on this mill, which was so heavy during all of this year, will therefore continue in 1907, and it is understood that the Pueblo mill is also heavily booked. It is stated that the Illinois Steel Co. was not able to take its allotment of the Pennsylvania tonnage, the Carnegie mills taking it all. Among the additional orders for 1907 placed during the week is the Wabash with 10,000 tons. A very fair amount of business was also placed with the rail mills for delivery during the current year. This includes 15,000 tons additional for the Chesapeake & Ohio, 6200 tons for a Louisiana road, 6000 tons for the Oneida Railroad and 5000 tons for the Nickel Plate.

"There has been some fair buying of foundry iron at lake points, in New England and in the Philadelphia and New York districts. But in the Central West what little business has come up has been taken away from Southern furnaces, who have for some time been apparently indifferent to sales. The leading interests have maintained their agreement to hold for the basis of \$14 at Birmingham for No. 2.

"The market for steel-making irons is practically swept clean up to the middle of the year, with an unsatisfied demand. In the East some sales of round lots of basic have been effected, and there are some good inquiries in the market. These include one lot of 10,000 tons and another of 10,000 to 15,000 tons."

Shaft Governors: Statics of Shaft Governors. By W. Trinks, M. E., and C. Housum. Published by the D. Van Nostrand Company, 23 Murray street, New York. Price 50 cents.

This little book, issued in convenient form for the pocket, presents data which has grown from notes and formulae prepared for the immediate use of the authors to earn their daily bread by designing and adjusting engines and their parts. They found little help in the technical literature, and consequently determined to make their own theory. Their volume presents the statics of shaft governing, but it does not claim to cover the entire field. If the sale of this first volume proves that there is a sufficient market for this class of literature a second volume will be published containing the following subjects: Gravity balance and oscillations caused by gravity, disturbances caused by too small rotating masses in eccentric synchronous oscillations of spring, stability of regulation and influence of inertia masses, speed variations and oscillations under change of load, and effect of oil dashpots and friction brakes.

The people of DeKalb county, Georgia, will petition the next legislature for the right to issue \$300,000 of bonds for road improvement.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW LINES PLANNED.

Several Railroad Companies Chartered to Build in the South.

The Interstate Railway Co. has been chartered to build a line from a point on the State boundary between Pocahontas, Va., and Bramwell, W. Va., to Hinton, W. Va., and also from the same point on the State line to Bluefield, W. Va. Headquarters will be at Bramwell, and the capital is \$10,000. The incorporators are Edward Cooper, Jairus Collins, Frank M. Archer, C. W. Freeman and Thomas Levering.

The Catawba Valley Railway Co. has been chartered in South Carolina with \$45,500 capital to complete the railway proposed between Catawba Junction and Catawba Falls, 20 miles. On this 10 miles have been built, and it is said that the charter means an extension of the Seaboard Air Line, as President Alfred Walter of the Seaboard is president of the new company, with which other officers of the Seaboard are also connected. The charter gives the right to build from Lugoff, near Camden, S. C., to Harmony, S. C., 91 miles, and it is said that the ultimate purpose of the road is to connect with the South & Western Railway at some point in North Carolina, as the charter gives the new company the right to go to the State boundary in York county, South Carolina. The incorporators are J. L. Glenn, E. Berkeley and J. A. Pride.

A report from Orangeburg, S. C., says that it is proposed to build a railway from North, S. C., a point on the Seaboard Air Line, via Orangeburg to a point on the Santee river near Vance, S. C., about 45 miles. It is said that the line may be operated by both steam and electricity, and that water-powers will be developed along the route to supply electricity for the railway and also for factories in the way of light and power. The application for charter includes incorporators as follows: Wm. C. Wolfe of Orangeburg, E. C. Johnson of North, Edgar L. Culler and Thomas R. McCants.

The Dalton & Allendale Railroad Co. has been chartered in Georgia to build a line 22 miles long from Dalton via Chatsworth to Allendale, near the foot of Fort Mountain. Headquarters will be at Dalton, Ga. The capital is \$500,000, and the incorporators are John D. Follette of Cincinnati, Robert L. Wayman of Chattanooga, J. F. Allen of Murray county, Georgia; J. M. Sanders, J. A. Longley, M. H. Williams, W. R. Cannon, W. M. Sapp, H. C. Hamilton, J. K. Farrar, H. B. Farrar and F. F. Farrar of Dalton, Ga.

The Atlanta & New Orleans Railway Co. has applied for a charter in Georgia to build a line 56 miles long from Atlanta to a point on the Alabama boundary between Carroll county, Georgia, and Cleburne county, Alabama. The capital is \$100,000, and the incorporators are B. L. Crew, B. M. Fowler, B. H. Abrams, F. M. Butt, James S. Middleton, Wm. N. Hawks, Ronald Ransom, H. S. Collinsworth, Eb. T. Williams and F. M. Mikell, all of Atlanta.

A dispatch from Albany, Ga., says that application will be made to charter the Georgia Southwestern & Gulf Railroad Co. to build a line 150 miles long from Albany and Dawson, Ga., via Bainbridge to St. Andrews Bay, Fla., or some other point on the Gulf coast, perhaps St. Johns Bay. Those named as interested in the movement are W. M. Legg, H. J. Bruteau, A. H. Russell and M. D. Powell of Bainbridge, M. A. McRaney of Emulod; W. W. Gordon, Jr., of Savannah, W. H. Mil-

ton of Marianna, Fla.; E. V. and F. R. Babcock of Pittsburg, Pa.; D. S. Pate and G. J. Pope of Chicago.

The purpose of the Gate City Terminal Co., which has applied for a charter in Georgia, is to build, equip and maintain terminals in Atlanta for the Atlanta, Birmingham & Atlantic Railway and its allied properties. It will build an entrance line from Howell's Station into Atlanta, about three miles, and will construct terminals on Peters street. The capital stock is \$500,000, and the incorporators include P. S. Arkwright and others, who are associated with the Atlanta, Birmingham & Atlantic Railway. It is said that the latter proposes to have its trains running between Birmingham, Atlanta and Brunswick, Ga., by January 1, 1908.

The Paris & Mt. Sterling Electric Railway Co. has been incorporated in Kentucky, to build a line 24 miles long between the points named; capital \$100,000. The incorporators are Henry A. Power, Robert C. Talbott, R. J. Neely of Paris; W. A. Thomason and John T. Collins of Middletown; J. M. Bigstaff and H. Clay McKee of Mt. Sterling, Ky.

The Rice Belt & Northwestern Railroad Co., capital \$2,000,000, has been organized at Welsh, La., to build a line connecting Lake Arthur, Welsh and Kinder. Application will be made for a charter. The officers are L. E. Robinson, president; Dr. R. R. Arceneaux, vice-president; O. Fulton, treasurer; Dr. J. P. Cooper, secretary; directors, E. M. Clark, L. E. Robinson, P. J. Unkel, Dr. J. P. Cooper, mayor of Welsh; T. S. Langley, C. E. Carr, F. D. Calkins, O. Fulton and Dr. R. R. Arceneaux.

DEAL AT PENSACOLA.

Electric Railway and Light Plants Sold to Be Developed.

The MANUFACTURERS' RECORD has received information confirming the report that the Pensacola Electric Terminal Railway Co. and the Escambia County Electric Light & Power Co., also of Pensacola, Fla., have been purchased by Stone & Webster of 84 State street, Boston, Mass., who will develop both properties. A dispatch from Pensacola says that the properties have been transferred to the new owners, and it is said that the deal represents about \$700,000. The purchasers are reported as saying that many improvements will be made immediately. It is intended to establish a pleasure resort at Magnolia Beach and to electrify the steam railroad running from Pensacola to Fort Barrancas. The new organization of the railway company is as follows: H. H. Hunt of Boston, president, and J. W. Leadley, also of Boston, general manager; Robert Richardson, treasurer; directors, H. H. Hunt of Boston, A. C. Blount, Jr., of Pensacola, Robert Richardson, J. C. Dunham of Pensacola, Henry Palmer, John C. Rice and F. I. Bieler of Boston.

The former officers were: W. H. Northup, president; A. C. Blount, Jr., vice-president, Pensacola, Fla.; DeCourcy W. Thom, secretary and treasurer, Baltimore, Md.; L. W. Williams, auditor, and J. C. Dunham, superintendent, Pensacola, Fla. The directors were D. H. Gordon, A. H. Taylor, DeCourcy W. Thom of Baltimore, W. H. Northup, W. H. Knowles, A. C. Blount, Jr., and J. C. Dunham, Pensacola, Fla.

Messrs. Stone & Webster control the Jacksonville Electric Co. at Jacksonville, Fla.; the Columbus Electric Co. and the Columbus Railroad Co. of Columbus, Ga.; the Savannah Electric Co. of Savannah, Ga., and the Tampa Electric Co. of Tampa, Fla., besides a number of other public utilities in other parts of the country.

Meridian to Tombigbee.

Mr. C. F. Woods writes from Meridian, Miss., to the MANUFACTURERS' RECORD confirming the report that the Meridian & Tombigbee Railroad Co. has applied for incorporation. He says that the incorporators are C. F. Wood, Frank Heiss, A. D. McRaven, J. M. McBeath, A. Poitevant, Dr. J. R. Phillips and others. A preliminary survey was made five or six months ago and rights of way along the proposed route have been procured. The present survey is to obtain a permanent location, and the engineers are headed by Mr. F. D. Harvey, recently with the Frisco system. He is pushing the work rapidly, and expects to finish it by June 1, when the incorporators hope to be in position to receive estimates from contractors to build the road.

The proposed line will touch the Tombigbee river at Nacheola, Ala., which will give it a water connection with the outside world all the year round. The road will run through a fine section of country which is so developed that Mr. Woods says it will furnish sufficient tonnage to more than pay running expenses. Besides, the line will go into and through a tract of 70,000 acres of timber lands averaging from 10,000 to 12,000 feet per acre.

In conclusion, he writes the prospect for a paying road is very flattering, and the "parties behind the guns" feel very hopeful.

Baltimore, Frederick & Hagerstown.

The Baltimore, Frederick & Hagerstown Electric Railway Co. has awarded a contract to Westinghouse, Church, Kerr & Co. of New York for building its line from Frederick to Hagerstown, Md., 26 miles, and has arranged for underwriting \$10,000,000 of 5 per cent. bonds. Work between Frederick and Hagerstown is expected to start shortly, as soon as a condemnation suit is settled. The line from Frederick to Baltimore is 52 miles long, and there will be about seven miles of sidings, making a total of 85 miles of track. Between Frederick and Hagerstown two tunnels are necessary, one at Braddock Heights about 4000 feet long and another at South Mountain about 6000 feet long.

James E. Ingram, Jr., of Baltimore is president; J. Roger McSherry, vice-president; Thomas H. Howard, treasurer, and Henry Coblenz, secretary, all of Frederick. Robert P. Graham of Baltimore is counsel.

The company owns the Frederick & Middletown Electric Railway, and part of its route at least will be followed in constructing the line to Hagerstown.

Opelousas to Alexandria.

Mr. L. E. Littell writes from Opelousas, La., to the MANUFACTURERS' RECORD confirming the report of the organization of the Opelousas, New Orleans & Northwestern Railway Co. to build a line at present 40 miles long connecting Opelousas and Ville Platte with Oakdale and Alexandria, La. At each end of the line connection will be made with three railroads. The country through which the road will pass is level, open and well settled for 25 miles, and 15 miles or more is virgin pine forest. The survey has not yet begun, but the engineer is Ira W. Sylvester of Alexandria, La.

The directors of the company are L. E. Littell, president; Yves Andrepoint, vice-president; J. G. Lawler, secretary; J. L. Dossman, R. Remi Mornhinveg, M. L. Swords and J. F. Vidrine.

Equipment Notes.

The Mobile & Ohio Railroad will, it is reported, purchase 15 locomotives. Six eight-wheel locomotives have been

ordered by the New Orleans Great Northern Railroad from the Climax Manufacturing Co. The same company has also ordered three ten-wheel engines from the Baldwin Works.

Reported that the Seaboard Air Line will order 500 box cars of 80,000 pounds capacity each.

The Norfolk & Southern Railway is reported to be preparing plans for new equipment.

The Baldwin Works is building four six-wheel switching locomotives for the Nashville Terminal Co.

The Kansas City, Mexico & Orient Railway has ordered 400 box cars of 60,000 pounds capacity, 100 flat cars of 80,000 pounds capacity and 100 stock cars of 60,000 pounds capacity from the American Car & Foundry Co.

Indian Territory Work.

A correspondent of the MANUFACTURERS' RECORD writing from Davis, I. T., says: "Railroad construction is well under way around this little city. The Davis & Turner Falls Interurban, the Oklahoma & Eastern and the Coalgate, Sulphur & Western are all under construction. The grade is finished on the latter, and each of the others are grading. The Davis & Turner Falls line is expected to be in operation on or about July 1; the Eastern Oklahoma (a branch of the Santa Fe), between Sulphur and Davis, a distance of 10 miles, will be ready for the crossties and rails about July 1."

Illinois Central's Big Wharf.

The immense wharf which has just been completed by the Illinois Central Railroad at New Orleans is 3500 feet long and is divided into sections of 500 feet each by heavy fire walls. The width of the wharf varies from 132 to 152 feet. The roof construction is principally of steel. There are also two freighthouses, one 1000 feet long and another 1200 feet long, each being 100 feet wide, and there is a cotton warehouse well-nigh half a mile long, its exact length being 2391 feet and its width from 100 to 160 feet. Fireproof construction distinguishes all these buildings.

Seaboard at Jacksonville.

The Seaboard Air Line is about to begin the construction of a new receiving warehouse at the foot of Hogan street, in Jacksonville, Fla. A foundation of piles, concrete and brick is now being prepared. The company is also about to build a forwarding warehouse of about equal size, 60x310 feet, and the site is being cleared for this structure, which will be one story high, the other to be two stories. The Seaboard's new pier at the foot of Hogan street has been put in service. Several hundred men are employed in constructing the company's large freight yards.

New Second Track.

The Chesapeake & Ohio Railway has put in operation since July 1 last about 21 miles of new second track, and now has under construction a little more than 34 miles of second track at various points, the two longest stretches being each between 11 and 12 miles in length. Contracts were recently let for nearly 78 miles, the longest stretch being about 29 miles in length and the next about 16 miles. A contract for something more than 10 miles is about to be let, bids having been requested.

Railroad Notes.

The Louisville & Nashville Railroad has completed and put in service its new double track on the Birmingham division from Boyles to Black Creek, Ala., about 6½ miles. This work relieves the congestion which previously existed there.

A press report from Guthrie, O. T., quotes W. S. McCaull, president of the Guthrie, Fairview & Western Railway, as saying that negotiations are under way looking to a deal through which the line will pass under the control of James J. Hill's railroad interests, giving a short outlet to the Gulf for the Burlington system.

The city council at Lynchburg, Va., has acted favorably upon the franchise for a cable line on 9th street to assist heavily-loaded trucks and wagons in hauling freight up the hill from the foot of 9th street to Main street. Col. Isaac B. Smead of Cincinnati is said to be the inventor of the cable line, and among those interested are J. M. B. Lewis of Lynchburg and T. C. Looney and others of New York.

The MANUFACTURERS' RECORD is informed that Mr. A. N. Bullitt has resigned his position as chief engineer of the Virginia & Carolina Coast Railroad Co. to accept position as chief engineer of the Pittsburg, Binghamton & Eastern Railroad, which is to be built from Binghamton, N. Y., to Pittsburg, Pa. The proposed line is approximately 225 miles long, which will be very heavy work, having considerable tunnel and bridge construction, as well as grading.

A correspondent of the MANUFACTURERS' RECORD writes that grading is practically completed on the Apalachicola Northern Railroad from St. Joseph to Apalachicola, Fla., and the construction company is rapidly building its trestle across the Apalachicola river. This bridge will be nearly a mile long, and all of the piling is completed except that for the draw. Forces are at work on both ends of the line, and the road will probably be in operation by December 15.

Big Paper and Pulp Mill.

Virginia, North Carolina and New York capital will combine for the purpose of establishing an extensive paper and pulp manufacturing plant, to be operated by water-power, at Roanoke Rapids, on the Roanoke river, five miles from Weldon, N. C. The MANUFACTURERS' RECORD is informed by telegraph that the mill will have a capacity of 20 tons, has been designed by Jos. H. Wallace, and that bids for construction and mechanical equipment will be invited at once. This enterprise will be incorporated under the title of the Roanoke Rapids Paper Manufacturing Co., with a minimum capital stock of \$100,000 and a maximum capital of \$150,000. It is being organized by Messrs. A. H. Christian, Jr. (who will be president), E. B. Addison, T. C. Williams Jr., W. M. Habliston, A. D. Williams, T. A. Cary and H. E. Baskerville, all of Richmond, Va., where the main offices will be located; T. L. Emry of Weldon, N. C., and W. S. Parker of Henderson, N. C.

Besides Mr. Christian, other officers are H. A. Edwards, vice-president and treasurer, and W. C. Edwards, manager. Mr. Wallace, the engineer in charge, is of New York city. The company's mill will utilize Southern pine wood in manufacturing wrapping paper.

The Dallas (Texas) Commercial Club has elected Messrs. Alexander Sanger, president; M. H. Thomas and F. F. Sliney, vice-presidents, and N. H. Mahana, James A. Dorsey, John V. Hughes, J. H. Ardrey, R. Liebman, F. C. Davis, S. F. Moss, Ennis Munger, Henry D. Lindsey, Royal A. Ferris, M. N. Crane and Edgar L. Pike, directors.

The Commercial Club of Palmer, Texas, has been organized with Messrs. J. W. Hughey, president; Luke Harrison, vice-president; L. D. Griffith, secretary, and W. J. Hoskey, treasurer.

MECHANICAL

"Buffalo" Compressed-Air Forges.

Although the great power and adaptability of compressed air have been known for a long time, new applications have been produced very slowly. Only recently the Buffalo Forge Co. of Buffalo, N. Y., has perfected attachments for the use of this confined "ozone" in producing the blast in its portable riveting forges.

One such application is shown by accompanying Fig. 1. In this design the air is admitted by a needle valve through two brass nozzles into a cast-iron mixer nozzle, and thence direct into the tuyere. By the use of this needle valve the volume of air furnished is varied without affecting the pressure, and by such compounding as shown the volume of air required is reduced by one-half.

Another application in which the compressed air acts directly upon the blast fan of the forge is shown by Fig. 2.

Extensive experiments show great economy in using the jet of air direct into the tuyere as described above, e. g., it takes one-ninth the amount of air to operate a forge in this manner that it does to operate the fan forge with compressed air (Fig. 2), and it takes one-fortieth as much as it does to operate the free-air forge with an ordinary blower. The pressure re-

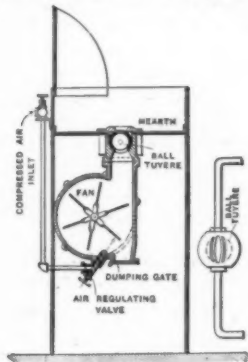


FIG. 1.—"BUFFALO" COMPRESSED-AIR FORGES.

quired is not high; in fact, very low pressures have been used advantageously.

The wide application of these forges for use on bridge and building construction, large railroad and repair shops, and, in fact, wherever compressed air is available,

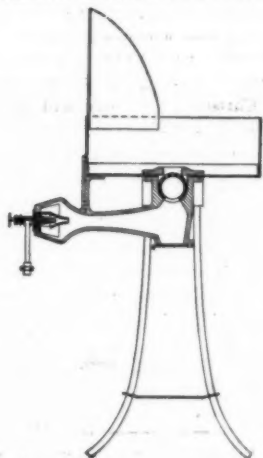


FIG. 2.—"BUFFALO" COMPRESSED-AIR FORGES.

must be apparent to all, and the saving of time and labor in their usage, as well as the ease with which they may be connected by a small hose to the compressed air, should appeal to users everywhere.

Although the Buffalo Forge Co. makes both forges mentioned above, it recommends the compound compressed air operated on the injector principle (Fig. 1) because of greater simplicity, economy and more rapid heating.

The Niagara Ties or Bonds.

Herewith are presented two illustrations which should interest all those who are concerned in improved specialties for building-construction purposes. The specialties in reference are the Niagara wall tie or brick bond and the Niagara veneer tie or brick bond for securing brick to frame in brick-veneer buildings. They are made of the best steel, galvanized. Scientifically, they are correct, having the principles of the keystone and offering great resistance. They cannot be started at all without starting every part at once,



NIAGARA VENEER TIES OR BRICK BONDS.

and when bedded in mortar an initial movement is practically impossible without breaking them.

The wall ties are three-eighths inch wide by seven and one-half inches long, and are guaranteed to have an average breaking strain of 800 pounds each. When it is considered that, bedded in a wall, 10 of these ties represent a resistance of 8000 pounds to any tendency to spread, bulge, crack or swerve, some idea will be formed as to their value in stiffening and strengthening a wall. Their use strengthens a brick wall more than an addition of one width of brick. A hollow wall where they are used is stronger than a solid wall of the same thickness where they are not used. They make a solid and perfect connection between facing brick and the poorer brick used for backing, are easily bent at the middle to conform to uneven surfaces, and can be used in a space between bricks of only one-eighth inch. Placed lengthwise around openings and crosswise throughout the wall, even in moderate numbers, the addition to the strength and security of the wall is almost beyond belief. No brick wall would ever be built without good ties if all builders knew how greatly they strengthen the wall and how small the outlay required to buy them.

The veneer ties are seven-sixteenths inch wide and reach three and one-half inches into the wall clear from the sheathing. They are bent at the end, and have a hole punched, ready for nailing, and are fastened to the sheathing easily and rapidly with a common roofing or other nail. Bedded in mortar, they are practically immovable, as every part—top, bottom and sides—resists movement, uniting the frame, sheathing and brick wall into practically one strong and solid body, and under ordinary circumstances it is impossible to produce the slightest approach to a separation of the parts.

Both the wall ties and veneer ties are packed 1000 in a strong wood case for shipment. The wall ties weigh about 30 pounds and the veneer ties about 23 pounds per thousand.

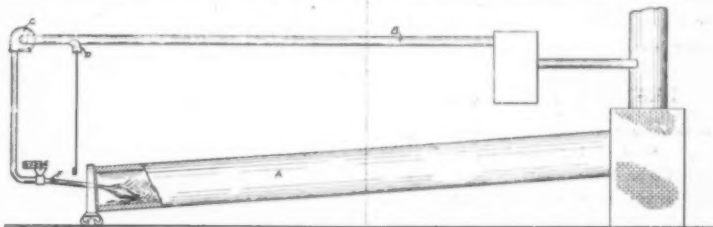
The Niagara Falls Metal Stamping Works of Niagara Falls, N. Y., manufactures these bonds and will send further details to applicants.

New Kiln-Firing Process.

A new kiln-firing process in use by the Lawrence Cement Co., Siegfried, Pa., has been accompanied with such tangible results in the increase of output and saving of fuel as to call for comment from cement manufacturers. When further trial has demonstrated the superiority of this method it is probable that it will speedily come into general use. The principle on which the new firing process rests is covered by patents granted to Byron E. Eldred and was formerly used in lime-burning. It has always been the aim of cement manufacturers to obtain an impinging flame with pure air blast. But experiments on this basis always resulted in an overheated flame and consequent destruction of the linings of the kiln. Until Mr. Eldred brought out his process the impinging flame was regarded as a problem which had yet to be solved. Mr. Eldred found that by diluting the air used to support combustion with a certain amount of the waste stack gases from the kiln he was able to generate heat at points where it

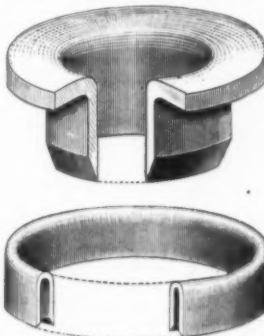
was most needed. His discovery resulted, as stated, in an increased output of cement clinker due to the improved application of the heat. In order to burn cement with economy just enough air to accomplish complete combustion of the powdered coal used should be supplied to the kiln. Excess of air means unnecessary heat loss at the stack. Further improvement in the operation of the kilns under the Eldred process is found in the improved calcining effect. To properly calcine the material a flame differing in quality from that ordinarily secured in the upper part of the kiln is desirable, so that a tempered im-

ping flame of lower temperature than an axial flame of high temperature is more efficient for the production of cement clinker. The waste gases of the kiln afford a means of changing the atmosphere in which the powdered coal burns to any extent necessary for the production of its specifically calcining flame. The diluted air also serves a useful purpose in lengthening the effective calcining flame. This long flame, however, does not cause the gas to leave the kiln at a high temperature. In most cases the stack temperature is less and the loss of heat of the stack gases less under the Eldred process than when



NEW KILN-FIRING PROCESS.

ings possess superior features of merit which have established the present large demand and is steadily calling for an increased output. The leather used is obtained from all parts of the world, including our own Western plains, which furnish that which is appropriate for some classes of work, while England furnishes chrome-tanned leather, which is impervious to heat, oil or water. The selection of leather has been a close study of the company for many years, and it aims to select that which possesses just the right degree of stiffness or flexibility or other peculiar qualities for the duties it is expected to perform. The company's work in manufacturing these packings is strictly individual, being made up only to specifications to fit the buyer's machines and cut



"WEAR-WELL" FLANGE "U" AND CUP PACKINGS.

from the best leather obtainable. The only particular shape or size or style of leather packings kept in stock are those styles, shapes and sizes which have been designed especially for certain buyers. The Detroit Leather Specialty Co. issues an illustrated pamphlet wherein is detailed its efforts in its special field of endeavor, and the contents are of such a character that they should not fail to be read by all users of packings.

passes to the pipe "F" into the kiln "A". The pipe "F" is so arranged with reference to the kiln that the hottest part of the flame "X" is in direct contact with the material. The kiln operator is able, by means of a lever attached to the air damper at "D", to regulate the air mixture to suit any condition in the kiln. When "rings" form an increase in the percentage in stack gases can be easily made, and will usually result in a speedy removal. It is stated that at the Lawrence Cement Co.'s mill each of the eight kilns in operation has increased the output about 8 per cent, and resulted in a decrease of fuel consumption of about 5 per cent., and in all cases there has been no change in the quality. This new kiln-firing process was installed by the Combustion Utilities Co. of New York.

"Wear-Well" Leather Packings.

Manufacturers and other users of leather packing for hydraulic, compressed-air and all special machinery will doubtless find that the accompanying illustrations of the "Wear-Well" products attract their attention. Packings play an important part in the mechanical world, and users of them are generally ready to be informed as to perfected products of that character. It is because of this that the accompanying illustrations are presented, and some reference to the manufacture of "Wear-Well" leather packings is of current interest. This manufacturer is the Detroit Leather Specialty Co. of Detroit, Mich., which claims that its pack-

ings possess superior features of merit which have established the present large demand and is steadily calling for an increased output. The leather used is obtained from all parts of the world, including our own Western plains, which furnish that which is appropriate for some classes of work, while England furnishes chrome-tanned leather, which is impervious to heat, oil or water. The selection of leather has been a close study of the company for many years, and it aims to select that which possesses just the right degree of stiffness or flexibility or other peculiar qualities for the duties it is expected to perform. The company's work in manufacturing these packings is strictly individual, being made up only to specifications to fit the buyer's machines and cut

from the best leather obtainable. The only particular shape or size or style of leather packings kept in stock are those styles, shapes and sizes which have been designed especially for certain buyers. The Detroit Leather Specialty Co. issues an illustrated pamphlet wherein is detailed its efforts in its special field of endeavor, and the contents are of such a character that they should not fail to be read by all users of packings.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Birmingham—Portland-cement Plant.—Atlantic & Gulf Portland Cement Co. has been organized with \$10,000 capital stock. Wm. E. Stokes is president, and James D. Evans, secretary.

Birmingham—Coal Mines.—Cahaba Southern Mining Co. has increased capital stock from \$2000 to \$4000.

Birmingham—Construction Company.—W. W. Ransom, M. T. Stradford, W. S. Scott and others have incorporated the Zamora Construction Co. with \$5000 capital stock.

Ensley—Land Improvement.—Steel City Land Co. has been incorporated with \$30,000 capital stock by E. G. Cale, B. C. Garrison, A. W. Lynch and others.

Pinchburg—Lumber Mill.—Flat Creek Mill Co. has been incorporated with \$200,000 capital stock by W. H. Louiselle, J. T. McKean, Cyrel Louiselle and Sibley Holmes.

Florida—Public Improvements.—Town has voted affirmatively the proposed bond issue for sewerage system, constructing jail and school building. Address Town Clerk.

Florence—Brick Works.—Florence Brick Co. is the title of company mentioned recently as organized with F. D. Green, president; S. P. Merrill, secretary-treasurer, and U. S. Hauerwas, general manager, to take over and operate the plant of the Hauerwas Brick Co.

Fort Deposit—Cannery.—Fort Deposit Canning Co. has been incorporated with an authorized capital stock of \$10,000 by J. D. Lamar, A. F. Brooks, W. B. Crum and others.

Gadsden—Electric-light and Power Plant.—Alabama City, Gadsden & Attalla Railway Co. is arranging for improvements to electric-light and power plant, installing an entirely new electric-lighting system of the most improved and modern type. About \$200,000 will be invested. J. D. Gaboury is general manager.

Goodwater—Water-power-Electrical Plant. Hall Bros., Dadeville, Ala., are engineers in charge of the construction of water-power-

electrical plant recently mentioned; plant to have a capacity of 100 horse-power and cost about \$12,000. J. S. Gilliland is in charge.*

Guntersville—Timber Development.—Reports state that St. Paul Brightwell and M. M. Downey have purchased a tract of timber land in Marshall county and will arrange at once for its development.

Mobile—Milk Depot.—Mobile Pure Milk Co. has been incorporated with \$30,000 capital stock by Thomas A. Doody, J. W. Doody, P. W. Pilkington and associates to pasteurize, clarify and bottle milk.

Pollard—Saw-mill.—Lindsay Lumber Co. will rebuild saw-mill previously reported burned. Equipment has been purchased.

Selma—Electrical Supplies.—A. W. Cawthorn and others have incorporated the Selma Electrical Supply Co. with \$5000 capital stock.

Sheffield—Water-power-Electrical Plant.—The Muscle Shoals Power & Development Co. has been organized with \$10,000 capital stock for the development of Muscle Shoals in the Tennessee river, transmitting the power obtained by electricity to Sheffield, Florence, Tusculumbia and other towns for light, heat and power purposes. J. S. Kernachan of Florence, Ala., is president; C. B. Ashe, vice-president, and Joseph R. Coleman, secretary-treasurer, both of Sheffield. This enterprise was previously referred to.

ARKANSAS.

Augusta—Electric-light and Power Plant.—City Power, Light & Water Co. has been incorporated with \$50,000 capital stock by J. A. Vinson, A. H. Tilman Campbell and Louis S. Vinson.

Baring Cross (P. O. Little Rock)—Car-repair Shops, etc.—St. Louis, Iron Mountain & Southern Railway. It is reported, has let contract to Westinghouse, Church, Kerr & Co. of New York, N. Y., for the construction of proposed car-repair shops and planing mill. It is stated that the car-repair shops will be 300 feet long, cover 12 tracks, and cost \$50,000. It is estimated that the entire improvements will aggregate an expenditure of \$100,000. E. F. Mitchell of St. Louis, Mo., is engineer of construction.

Mt. Olive—Stave Factory.—Mt. Olive Stave Co. will erect building 35x30 feet, equipping for a daily capacity of 16,000 to 20,000 tight barrel staves. T. J. Walbert is manager.

DISTRICT OF COLUMBIA.

Washington—Wagon Works.—The Rock Creek Auto and Wagon Works, 2613 Pennsylvania avenue N. W., will erect an addition to its plant; two stories and basement, 64x73 feet; brick; steel beams; cast-iron columns; slag roof; electric wiring and fixtures; sanitary plumbing; hand elevator, 9x22 feet. Brennan Construction Co., foot 31st street N. W., is estimating on construction; A. B. Mullett & Co., architects, 1411 F street N. Y.

Washington—Bakery.—John G. Melnberg, baker, 714-716 11th street S. E., has awarded contract to August Getz & Son, Stewart Building, 6th and D streets N. W., for the construction of an addition to his plant; two stories, 50x60 feet; brick with stone trimmings; steel beams; cast-iron columns; slag roof; galvanized-iron cornice; Spelden & Spelden, architects, 705 G street N. W.

FLORIDA.

Comfort—Cotton Gin.—Dickson Bros. will erect cotton gin.*

De Land—Sewerage System.—City has voted affirmatively the proposed \$12,000 bond issue for constructing sewer system. Address The Mayor.

Greenville—Saw-mill.—Greenville Lumber Co., mentioned last week as incorporated, contemplates erecting saw-mill for the development of 22,000 acres of timber land. Geo. T. Betts of Ashburn, Ga., is secretary-treasurer.

Jacksonville—Cake and Cracker Factory.—Jacksonville Cracker Works, reported incorporated last week with \$50,000 capital stock, will establish steam cake and cracker factory. A three-story brick building 100x105 feet will be erected. About \$15,000 will be expended in building and equipment; office, Room 9, 22 Hogan street.*

Jacksonville—Automobile Factory.—Southern Automobile Manufacturing Co., reported incorporated last month, will manufacture automobiles of high-wheel designs having a daily capacity after June 1 of five machines. After July 1 it is proposed to manufacture surreys and light delivery wagons. Factory

has been erected. John B. McDonald is president; Herbert G. Stone, vice-president and treasurer, and Hugh Partridge, secretary.*

Jacksonville—Oil Burners, etc.—Spencer Oil Gas Burner Co. has been incorporated with \$500,000 capital stock by Ely Spencer, F. T. Nooney, William S. Barnett, E. M. Fetting and W. M. Bostwick, Jr., to manufacture and deal in oil burners, stoves, heaters, ranges, etc.

Jacksonville—Sewerage System.—D. M. Baker, Room 14 Wedeman Building, has contract at \$81,793.95 for constructing sewer system previously mentioned.*

Marianna—Cotton Gin.—F. M. Watson and associates will erect cotton gin.

Palatka—Bucket Factory.—G. M. Davis & Son are installing machinery for the manufacture of cypress water buckets.

Tampa—Vehicle Works.—Loeffler Wagon Co. has been incorporated with \$10,000 capital stock by Gustav Loeffler, Julius Gottlieb and J. A. Lunsford.

West Palm Beach—Reclaiming Marsh Lands.—It is reported that the Florida East Coast Railway Co., James E. Ingraham of St. Augustine, third vice-president; the Boston & Florida Land Co., the Coast Line Canal & Transportation Co. and the Model Land Co. are arranging for the reclamation of about 8000 acres of fertile overflowed lands and the building of an automobile and wagon road several miles long. A canal will be cut from the submerged lands emptying into Lake Worth, along the side of which will be built a county road 25 feet wide. A system of dykes will also be constructed on Clear lake about a mile south of the city running three to four miles, on which will be built a modern roadway.

GEORGIA.

Atlanta—Shoe Factory.—J. K. Orr Shoe Co., 30-32 Auburn avenue, contemplates engaging in the manufacture of shoes in the fall if suitable floor space can be secured in a building already erected, the erection of factory building to be deferred. (This enterprise referred to last week.)

Columbus—Concrete Bridges.—Muscookee County Commissioners are arranging for the building of three concrete bridges at a cost of about \$11,000. B. H. Hardaway will superintend the construction.

Columbus—Foundry and Machine Shop.—It is reported that the Golden Foundry & Machine Co. has purchased site adjoining present plant on which to erect an addition.

Commerce—Electric-light Plant.—Bids are being asked until May 18 by the Harmony Grove Cotton Mills for the installation of electric-light plant; Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., engineers.*

Dalton—Cotton Mill.—M. C. Foster and associates will organize company to build mill of 7500 spindles for manufacturing yarns. About \$165,000 has been subscribed.

Ellijay—Iron Mines.—Georgia Carara Marble Co. is arranging for the development of iron properties near Ellijay. It will probably want machinery for an incline, including rails, dump cars, wire rope, etc.; F. E. Shippen, secretary.

Hickox—Saw-mill.—Hickox Lumber Co. will rebuild saw-mill reported burned last week. A building 40x150 feet will be erected and Lagrange—Cotton Mill.—Elm City Cotton Mills has awarded contract to Pike Bros. Lumber Co. for erection of mill building for plant recently reported; structure to be 104x454 feet, two stories high. It will contain 10,000 spindles and 100 looms.

equipped for a capacity of 20,000 feet of yellow-pine lumber. P. S. Knox is president and manager.

Macon—Street-paving.—City is reported as to vote on a \$100,000 bond issue for paving purposes. Address The Mayor.

McRae—Electric-light and Sewerage System.—City has voted affirmatively the proposed bond issue for constructing electric-light plant and extending sewerage system. Address The Mayor.

Millen—Metal Bridge.—Jenkins county is considering the construction of a metal bridge across the Ogeechee river; C. W. Sharpe, ordinary.

Newnan—Cotton Mill.—W. C. McBride, W. A. Steed and others will organize company with capital stock of \$125,000 to build cotton mill.

Waynesboro—Water-works and Sewerage.—City will vote June 14 on a \$60,000 bond issue

for constructing water-works and sewerage system. Address The Mayor.

KENTUCKY.

Hopkinsville—Woolen Mill.—Incorporated: James Cate & Son Company, capitalized at \$25,000, for manufacturing woolen goods. It will enlarge and continue plant owned by James Cate, J. H. Cate and John T. Edmunds, incorporators of the new company.

Hopkinsville—Tobacco-rehandling Plant.—Forbes Manufacturing Co. has contract to erect factory building for the American Snuff Co., previously reported; to be two stories, of brick, have a floor space of about 40,000 feet and a capacity for handling 5,000,000 pounds of tobacco annually.

Jeffersonton—Oil and Gas Wells.—Jefferson County Oil & Gas Co. has been incorporated with \$100,000 capital stock to drill for oil and gas on 730 acres of land recently leased. O. S. Kline is president; Clint C. McClarty, vice-president; H. N. Reubelt, secretary-treasurer, and M. E. Kline, general manager.

Lexington—Tobacco Factory.—United States Tobacco Co. is reported as to erect tobacco factory.

Louisville—Sewerage System.—Sewer Commission, Peter Lee Atherton, chairman, has appointed Samuel M. Gray, Providence, R. I., as first consulting engineer in charge of constructing sewerage system, recently mentioned, to cost \$4,000,000.

Louisville—Electric-power Plant.—It is reported that the Louisville & Eastern Railroad, Percival Moore, vice-president and manager, will expend \$100,000 in erecting power-house.

Menifee County—Timber Development.—N. H. Trimble of Mt. Sterling, Ky., it is reported, has purchased 2500 acres of timber land for development purposes.

Mortons Gap—Coal Mines.—John B. Brasher of Madisonville, Ky., has purchased the Oak Hill coal mines, including the company store, all machinery and equipment and about 25 houses. It is proposed to make improvements at the mines and operate as the Brasher Coal Co.

Newport—Woolen Mill.—Cincinnati Wool Co. of Cincinnati, Ohio, will establish a woolen mill. Building has been leased.

Paris—Railroad Repair Shops, etc.—Louisville & Nashville Railroad Co. is reported as considering extensive improvements, including the erection of repair shops, roundhouses, coal chutes, laying new tracks, etc. It is stated that \$100,000 will be expended. W. H. Courtenay, Louisville, Ky., is chief engineer.

Shelbyville—Telephone System.—Shelby County Telephone Co. has been incorporated with \$200,000 capital stock by E. A. Barnes, J. M. Payne, Berkeley Minor, Jr., and associates, all of Charleston, W. Va.

LOUISIANA.

Abbeville—Cold-storage Plant.—Planters' Rice Mill Co., Ltd., F. A. Godchaux, manager, will install cold-storage plant.

Kentwood—Public Improvements.—City has voted the proposed bond issue for public improvements; J. P. Chambers, mayor.

Lake Charles—Saw-mill.—Calcasieu Long Leaf Lumber Co., reported incorporated recently under Kansas City, Mo., will operate saw-mill with a monthly capacity of 5,000,000 feet; no buildings to be erected. R. A. Long is president; C. B. Sweet, vice-president; F. J. Bannister, secretary, and S. T. Woodring, treasurer and general manager.

Lake Charles—Street-paving.—Municipal Construction Co., Kansas City, Mo., is lowest bidder at \$68,912 for street-paving in the center of city.

New Orleans—Terminal Improvements.—New Orleans Terminal Co. is proceeding with its extensive improvements at Chalmette, previously reported, involving an expenditure of \$6,000,000. The slip now under construction will be 300 feet wide between two parallel concrete walls 1680 feet long and able to accommodate nine ships at a time. Two warehouses, one two stories, 100 feet long, and one one story, 1400 feet long, of fireproof construction, and a fireproof grain elevator with headhouse capacity of 1,500,000 bushels capacity and storage capacity in concrete tanks of from 1,500,000 to 2,000,000 bushels are yet to be constructed. James Stewart & Co. of St. Louis, Mo., were previously mentioned as having contract for the construction work.

New Orleans—Surgical Instruments.—In-

corporated: Clark & Kilesdorff Company, with \$20,000 capital stock, by Elwyn Clark, M. Kilesdorff and J. De Grange, to manufacture surgical instruments.

New Orleans—Land Improvement.—Boudreaux Land Co. has been incorporated with \$65,000 capital stock; Theophile Boudreaux, president; W. Godchaux, vice-president, and Charles Godchaux, secretary-treasurer.

New Orleans—Ferry Company.—Citizens' Ferry Co. has been incorporated with \$300,000 capital stock by J. P. Vezen, A. E. Hotard, F. C. Duvic, George Herbert, Jr., and associates. The company will bid for the Canal-street ferry franchise.

New Orleans—Furniture Factory.—Petit & Poh Co. is arranging for the erection of a three-story factory building. The most modern machinery will be installed and electricity will be used as motive power.

New Orleans—Lumber Plant.—Otis-Alcus Lumber Co. has been incorporated with \$100,000 capital stock. Samuel T. Alcus is president; Henry Alcus, vice-president; Henry A. Otis, secretary, and Rowland Otis, treasurer.

New Orleans—Machinery Manufacturing.—Brosius-Montz Manufacturing Co. has incorporated with \$500,000 capital stock to manufacture the Brosius no-treadle sewing machine and the Brosius spring motor, two devices worked in conjunction. Soon as site is secured building will be erected; incorporators, A. M. Halliday, Leonard Stern, Theo. Lehman and associates.

New Orleans—Land and Lumber Company. Arnold Land & Lumber Co., Ltd., has been incorporated with \$50,000 capital stock. J. B. Arnold is president; I. W. Simmons, vice-president, and W. S. Bryant, secretary-treasurer.

MARYLAND.

Baltimore—Button Factory.—The Alma Manufacturing Co., manufacturer of buttons and buckles, 611-651 South Monroe street, has awarded contract to McLaughlin Bros., 100 East Lexington street, for the construction of an addition to its factory on Baltimore & Ohio Railroad Co.'s tracks near Fulton avenue; one story, 61.9x134 feet; brick with stone trimmings; slag roof; cost about \$5000.

Baltimore—Telephone Exchange.—The Chesapeake & Potomac Telephone Co., Light near Baltimore street, will make a number of alterations and additions to exchange building at 1611 West Baltimore street. Morrow Bros., 212 Clay street, and Edward Brady & Son, 1113 Cathedral street, both of Baltimore, Md., and John McGregor, 729 12th street N. W., Washington, D. C., are estimating on construction; bids to be in May 17; Joseph Evans Sperry, architect, Calvert Building, Fayette and St. Paul streets.

Baltimore—Shirt Factory.—The Barrett-McKee Company has been incorporated with capital stock of \$25,000 to manufacture shirts and other wearing apparel by Harrison J. Barrett, 921 Calvert Building, Fayette and St. Paul streets; W. Shannon McKee, 1958 Edmondson avenue; John W. Spamer, Gustavus P. Jenkins, 117 Elliott street extended, and Virginia M. Clark.

Baltimore—Sugar Refinery.—The Chesapeake Sugar Refining Co. has been incorporated with capital stock of \$1,500,000 to refine sugar. Francis K. Carey is president; Thos. J. Hayward, vice-president; H. Carroll Brown, treasurer; James Piper, secretary, and J. H. Windfelder, general manager; offices at 621 Calvert Building, Fayette and St. Paul streets. The plant, which will be located at Wagner's Point, will have a capacity of 1500 barrels per day. The George M. Newhall Engineering Co., Ltd., Philadelphia, Pa., is preparing plans and specifications for the plant, which will be fireproof construction and cost about \$700,000. This project previously mentioned.

Baltimore—Drug Specialties.—The Klein & Fox Company, Druid Hill avenue and Mosher street, has been incorporated with capital of \$10,000 to manufacture drug specialties by Samuel Fox, Benjamin P. Klein, Louis D. Wildman, Albert Wildman and Bertha Wildman.

Baltimore—Brass Works.—The Maryland Brass and Metal Works, Wm. A. Gislief, president, 1539 Guilford avenue, has purchased lot at southwest corner Guilford and Girard avenues and will erect smelting and refining foundry on the site; two or three stories, 25x327 feet; brick with stone trimmings; steel-frame construction; Henry J. Tinley, architect, Hoffman Building, 11 East Lexington street.

Baltimore—Candy Factory.—The Guth Chocolate Co., Charles G. Guth, president, 1430-1434 Pennsylvania avenue, manufacturer of candy, has increased its capital stock from \$10,000 to \$25,000.

Baltimore—Drug Specialties.—The Richard Respass Red Seal Corn Cure Plaster Co. has

been incorporated with a capital stock of \$100,000 to manufacture drug specialties by Richard Respass, John T. Moylan and Samuel A. Booybe, all at 448 Equitable Building, Fayette and Calvert streets.

Baltimore—Paper-box Factory.—The Baltimore Paper Box Co. has been incorporated with a capital stock of \$20,000 to manufacture paper boxes by Barnett Freedman, 213 West Baltimore street; Samuel M. Singer, 414 West Baltimore street; Wolf Catzen, Charles Abramson and Louis H. Levin.

Hagerstown—Tunnels.—Baltimore, Frederick & Hagerstown Electric Railway Co., J. E. Ingram, Jr., president, Room 500, Maryland Telephone Building, Baltimore, Md., will construct two tunnels along the line of its proposed road from Baltimore to Hagerstown; one to be located at Braddock Heights, 4000 feet long, and one at South Mountain, 6000 feet long.

Kendall—Timber Land.—It is reported that the Kendall Lumber Co. of Pittsburg, Pa., has purchased the timber rights on 800 acres of land near Kendall.

Mechanicsville—Telephone System.—Southern Maryland Telephone Co. will increase capital stock to \$20,000 to make extensive improvements to system.

Oakland—Water-works and Sewerage System.—Julius C. Renning and William R. Offutt have applied for franchise to construct water-works and sewerage system.

Oakland—Natural-gas Mains.—West Virginia Central Gas Co. of Weston, W. Va., has secured franchise to furnish the city with natural gas.

Smithsburg—Copper Mines.—Dr. E. Fahlig and R. B. Rittersbach of Philadelphia, Pa., have secured an option on 150 acres of land containing deposits of copper ore, and, it is stated, will organize company for development.

Woodlawn—Road Improvements.—Thomas R. Martin & Sons, Franklinton, Md., have contract, as recently mentioned, for constructing about two miles of macadam road with culverts, iron drain pipes and vitrified-clay drain pipes; cost \$15,000.*

MISSISSIPPI.

Columbia—Drug Company.—Berry Drug Co. has been incorporated with \$10,000 capital stock by J. R. Berry, M. R. Berry and others.

Columbus—Public Improvements.—City will issue \$65,000 of bonds for extending and improving water-works and sewerage system and erecting school buildings. Address The Mayor.

Columbus—Cotton-cordage Mill.—Columbus Yarn & Cordage Co. will rebuild its plant, destroyed by fire last week at a loss of \$35,000. New machinery and construction material will be purchased, and I. H. Sykes can be addressed.*

Columbus—Knitting Mill.—Columbus Hosiery Mills will add 25 300-needle machines and 25 84-needle machines. Regarding the purchase of this equipment, I. H. Sykes can be addressed.*

Gulfport—Creosoting Works.—Chartered: Gulfport Creosote Works, with \$100,000 capital stock, by J. T. Jones, H. R. Stamford, A. M. Lockett and others.

Gulfport—Grain Elevator.—Holmberg Engineering Co., New Orleans, La., has contract for construction of grain elevator for the Gulfport Grain Elevator Co. recently reported incorporated with capital of \$50,000.

Hattiesburg—Lumber Company.—W. Meeds, S. R. Williams and others have incorporated the Meeds Lumber Co. with \$10,000 capital stock.

Houston—Lumber Company.—Incorporated: American Lumber Co., with \$5000 capital stock, by N. B. Hester, Charles Miller, J. F. Westmoreland and others.

Minter City—Hardwood Mill.—Chartered: Minter City Manufacturing Co., with \$10,000 capital stock, by W. T. Young, C. O. Ewell and others.

Seranton—Cement-block Factory.—Sam Seaton, Jr., is installing machinery for the manufacture of cement blocks; daily capacity 200.

Sumrall—Telephone and Telegraph System. Sumrall Telephone & Telegraph Co. has been incorporated with \$5000 capital stock. John H. Nutt is manager.*

Vicksburg—Electric-power Plant.—Harry K. Johnson, Frank Markham and associates have applied for franchise to construct an electric-power plant, and will organize company for its operation.

MISSOURI.

Joplin—Mining.—Little Rock Mining Co. has been incorporated at Little Rock, Ark., with \$100,000 capital stock for the further development of a mine near Joplin; incorpo-

rators, James Childs of Joplin, P. H. Ruebel, H. L. Horton, W. M. Kavanaugh and associates of Little Rock, Ark.

Kansas City—Electric Wiring.—Electric Wiring Co. has been incorporated with \$7500 capital stock by R. W. Hodges, John P. Phillips and C. F. Adams.

Kansas City—Medicine Factory.—International Mineral Remedy Co., previously reported incorporated with \$1,000,000 capital stock under Guthrie, O. T., will manufacture mineral preparations only, and will erect a large manufacturing plant, including grinding mills, tablet machines, etc. About \$25,000 will be expended in buildings and equipment. Some of the mills will have an hourly capacity of 500 pounds. J. S. Byers of Mulhall, O. T., is president; W. W. Rucker of Guthrie, O. T., secretary. Address, until June 1, J. S. Byers, president, Mulhall, O. T.*

St. Louis—Gaslight Mantles.—Century Light Co., reported incorporated last week, will manufacture gaslight mantles, having a daily capacity of 5000. About \$10,000 will be expended in equipment. No buildings will be erected; machinery purchased. T. P. Cronin is president; W. D. McClain, vice-president, and E. G. Rankin, secretary-treasurer; office, 1102 Pine street.

St. Louis—Furnace Company.—Hydro-Carbon Furnace Co. has been incorporated with \$30,000 capital stock by George A. Wells, Eddy H. Hovey, R. E. Desmond and associates to deal in furnaces, boilers, engines, etc.

St. Louis—Sewerage System.—McIntyre-Teese Construction Co. is lowest bidder at \$7115.60 for constructing a sewer in Chippewa-street sewer district.

St. Louis—Mining.—Bethune Mining Co. has been incorporated with \$20,000 capital stock by H. G. Tangner, T. E. Morrison and J. B. Bethune.

St. Louis—Machinery Company.—Chartered: William C. Johnson & Sons Machinery Co., with \$25,000 capital stock, by William C. Johnson, Richard A. S. Johnson and Daniel S. M. Johnson.

Webb City—Machine Shop, Foundry, etc.—Webb City Iron Works will erect machine shop 50x112 feet, foundry building 50x112 feet, boiler shop 52x32 feet, office and fitting room 52x25 feet. About \$45,000 will be expended in buildings and equipment. F. W. Caulkins is preparing plans. The company manufactures mining machinery and expects to be equipped for a capacity of one 200-ton concentrator plant within one week. It is proposed to increase the capital stock. This company was recently mentioned as to make improvements to plant.

NORTH CAROLINA.

Apex—Land Improvement.—Apex Land & Improvement Co. has been incorporated with an authorized capital stock of \$100,000 by L. S. Olive, P. J. Olive, W. W. Olive and associates.

Belhaven—Saw and Planing Mill.—Belhaven Lumber Co. is completing the erection of saw-mill to have a daily capacity of 100,000 feet, and will shortly begin the erection of planing mill 180x300 feet. The mill which the company has been operating was recently reported burned.

Charlotte—Cotton Mill.—Mayes Manufacturing Co., reported incorporated last week with a capital stock of \$100,000, will install 10,000 spindles to start with, intending to eventually have 25,000 spindles; J. H. Mayes of Charlotte, president; T. E. Moore of Tupac, S. C., vice-president, and L. A. Dods-worth of Charlotte, secretary; engineer in charge of construction, Stuart W. Cramer of Charlotte. Plans for building will be completed in four weeks and bids will be asked. Contracts have been awarded for machinery. Fine yarns will be manufactured.

Dunn—Commission Company.—L. J. Best, F. Smith, Jr., and E. S. Smith have incorporated the Dunn Commission & Supply Co. with \$25,000 capital stock.

Durham—Flour Mill.—Julian S. Carr is making improvements to the Carolina Roller Mills preparatory to resuming operations. Electrical equipment is being installed, and it is proposed to have the mill in operation in about 60 days; daily capacity 125 barrels of flour and 80 barrels of meal.

Elm City—Lumber Company.—John R. Dawes, R. T. Barnhill of Elm City, John H. Robbins of Sharpsburg, N. C., and J. T. Sharp of Raleigh, N. C., have incorporated the Robbins Lumber Co. with an authorized capital stock of \$25,000.

Greensboro—Foundry.—Cook-Lewis Foundry Co. has been incorporated with \$25,000 capital stock to take over and operate the plant of W. B. Cook & Co.; daily capacity one and one-half to two tons iron and brass castings. Henry C. Snyder is secretary-treasurer.

Lexington—Glass Factory.—J. R. McCrary,

D. F. Conrad, W. H. Walker, J. T. Hedrick and associates have organized a company with \$15,000 capital stock to manufacture mirrors for furniture.

Louisburg—Brick Works.—George W. Ford and M. F. Houck will establish brick plant to have a daily capacity of 60,000 bricks. Machinery has been purchased.

Lumberton—Cotton Mill.—National Cotton Mills, recently reported, has organized with N. A. McLean, president; George B. McLeod, vice-president; A. P. McAllister, secretary-treasurer, and J. W. Kaneer, superintendent; authorized capital \$200,000; details of mill not decided.

Lumberton—Lumber Plant.—Chartered: Alluvial & Hardwood Co., with \$25,000 capital stock, by W. P. Baker, W. D. Neves and Abner Baker.

North Wilkesboro—Street Improvements.—Town commissioners have decided to issue \$20,000 of bonds for street improvements; J. D. Fousier, clerk of board.*

Raleigh—Steam Laundry.—Excelsior Steam Laundry has been incorporated with \$50,000 capital stock by B. W. Baker and others.

Shope—Veneer Factory.—J. S. Bailey Company, it is reported, is arranging for the erection of veneer factory.

Warrenton—Saw-mill.—Warrenton Real Estate Co., recently organized with M. P. Burwell, president, and E. S. Allen, secretary-treasurer, will operate saw-mill.

Washington—Sand-lime-brick Plant.—Washington Investment Co., W. E. Jones, general manager, will establish plant for the manufacture of sand-lime-brick.*

SOUTH CAROLINA.

Antreville—Cottonseed-oil Mill.—S. J. Wakefield, J. I. Crowther, C. T. Lyon and W. S. Grayden are organizing company with \$20,000 capital stock for the establishment of a cottonseed-oil mill.

Camden—Cotton Mill.—Hermitage Cotton Mills will add 2000 spindles and looms to match; present equipment 12,064 spindles and 300 looms.

Charleston—Cotton Factors.—Chartered: Porter-Snowden Company, with \$15,000 capital stock. Jenkins M. Robertson is president; D. Jennings Porter, vice-president, and James G. Snowden, secretary-treasurer.

Darlington—Brick Works.—Bright Williamson and J. E. Blackwell have incorporated the Darlington Brick Co. with \$20,000 capital stock.

Fountain Inn—Printing Plant.—Fountain Inn Printing Co. has been incorporated with \$1000 capital stock by George E. Clark, R. W. Davis and D. M. Garrett.

Greenville—Monazite Mines.—T. W. Miller, William Teague, D. E. Shade and associates of Joplin, Mo., operating monazite mines in Greenville county, have begun the erection of four mills to have a daily capacity of 1000 pounds each. They are at present operating a mill with a daily capacity of 400 pounds.

Greenville—Summer Resort.—Fall River Land Co. has been incorporated with \$25,000 capital stock by H. H. Price, H. J. Haynsworth, Oscar K. Mauldin of Greenville and W. H. Patterson of Atlanta, Ga. It has purchased a tract of land in the Blue Ridge mountains known as "Pott's Cove," which will be developed as a summer resort.

Jonesville—Cotton Mill.—Jonesville Manufacturing Co. has voted increase of capital stock from \$175,000 to \$350,000, as recently proposed, in order to make enlargements lately reported as contracted for. The building will be two stories high, 100x300 feet, to contain 10,000 spindles, 300 looms, etc. All contracts have been awarded. J. E. Sirrine of Greenville, S. C., is engineer in charge.

Newberry—Cotton Mill.—Mollohon Manufacturing Co. will hold stockholders' meeting June 15 to consider increasing capital stock from \$500,000 to \$1,000,000 for the purpose of adding 12,000 spindles and 223 looms; present equipment 29,562 spindles and 672 looms.

Orangeburg—Sewerage System.—City has voted affirmatively the \$50,000 bond issue, recently mentioned, for constructing sewerage system. Address The Mayor.

Rock Hill—Cotton Mill.—Aragon Cotton Mills, reported incorporated last week, has a capital stock of \$350,000, and will build plant for 20,000 spindles and 600 looms for manufacturing sheetings. Details of buildings and equipment are being considered. J. E. Sirrine of Greenville, S. C., is architect-engineer in charge. Alex. Long is president.

Spartanburg—Street-paving.—City is considering expending \$25,000 additional for cement paving. Contract was recently let for \$125,000 worth of paving. Address The Mayor.

Spartanburg—Land Improvement.—American Suburban Corporation of Norfolk, Va.,

has purchased 20 acres of land adjacent to city which will be developed as suburban site.

Spartanburg—Lumber Company.—Incorporated: J. C. McDuffie Company, with \$15,000 capital stock, by N. C. McDuffie, W. R. Montgomery and others.

TENNESSEE.

Chattanooga—Sewerage System.—Board of Public Works will readvertise for bids for constructing Ninth-ward sewer, as all bids submitted for the work are above appropriation on hand; Robert Hooke, city engineer.

Chattanooga—Brick and Tile Works.—W. A. Poe is organizing company with \$50,000 capital stock for establishment of brick and tile works at St. Elmo.

Johnson City—Street Improvements.—City will vote June 5 on the issuance of \$10,000 of bonds for street improvements. Address The Mayor.

Knoxville—Marble Works.—United States Marble Co. has secured permit for the erection of proposed \$5000 factory building.

Knoxville—Sewerage System.—Charles T. Heins has contract for constructing about 600 feet of sanitary sewer in North Knoxville.

Knoxville—Marble Works.—United States Marble Co. will erect two-story building 132x84 feet, equipping for sawing and finishing marble. About \$10,000 will be expended; Miller & Rogers, Cincinnati, Ohio, architects. This enterprise recently referred to.

Knoxville—Candy Factory.—Littlefield & Steere Company will re-establish candy factory recently reported burned. The building will be a four-story brick of mill construction, equipped with automatic sprinklers, have a fireproof boiler-room in basement and will cost \$25,000. It is owned by the Swenson estate. Equipment will be installed at a cost of \$15,000 to \$20,000 for the manufacture of high-grade chocolate confectionery; R. F. Graf, architect.*

Memphis—Coal and Coke.—C. M. Bryan, P. H. Patton, Sam Schloss and J. S. Tobin have incorporated the Pittsburgh Coal & Coke Co. with \$10,000 capital stock.

Memphis—Suburban Improvements.—J. H. Phillips, manager Interstate Realty Co., is organizing company with \$200,000 capital stock for the establishment of suburban residence site. A tract of 1700 acres 10 miles from Memphis has been purchased, which will be subdivided into building lots. Electric-light plant will be installed and an artesian well drilled for furnishing the water.

Nashville—Buggy Factory.—De Ford Buggy Co. has been incorporated with \$30,000 capital stock by R. A. Coleman, E. S. Shannon, M. P. Martin and others.

Shelbyville—Electric-light Plant.—J. F. Boyd is arranging for making improvements to electric-light plant, installing new equipment.

Sparta—Telephone System.—Gainesboro Telephone Co. will extend and improve system at a cost of \$100,000, as mentioned last week. J. H. Anderson is manager.*

TEXAS.

Austin—Publishing.—Austin Statesman Co. has been incorporated with \$30,000 capital stock by Joe Harrell, B. W. Randolph and R. L. Batts to continue the publication of the Austin Statesman.

Beaumont—Machine Shop.—Lee Carroll and associates have erected an ironclad building and will install machine-shop equipment, which has been purchased. A specialty will be made of repairing automobiles.

Bellevue—Development Company.—Webb Development Co. has been incorporated with \$5000 capital stock by Sidney Webb, A. W. Melton, W. F. Manning and others.

Belton—Cotton Gln.—Farmers' Co-Operative Gln Co. has been organized with \$8000 capital stock.

Bowle—Cotton Compress.—Mr. Chapman of the Gulf Compress Co., Memphis, Tenn., has purchased site on which to erect cotton compress.

Burleson—Cotton Gins, Grist Mills, etc.—Farmers' Union Co-operative Association has been incorporated with \$8000 capital stock by S. A. Lawson, M. A. Brister and J. E. Beene.

Carrollton—Brick Works.—Carrollton Brick Co. has been organized with \$50,000 capital stock.

Cleveland—Saw-mill.—Hanks & Henderson, mentioned last week as erecting saw-mill, will operate plant with a daily capacity of 15,000 feet of ties and lumber.

Clyde—Lumber Company.—Chartered: B. C. Clemer Lumber Co., with \$20,000 capital stock, by B. C. Clemer, J. H. Harkins and Ed S. Hughes.

Coleman—Water-works.—Coleman Water

Supply Co. has incorporated with \$15,000 capital stock to construct water-works; incorporators, H. M. Beakley, J. A. B. Miller, R. H. Alexander and others.

Coleman—Lumber Company.—Chartered: Leeper-Wyatt Lumber Co., with \$50,000 capital stock, by Mrs. J. W. Leeper, J. M. Gardner, J. S. Wyatt and others.

Dallas—Tobacco Factory.—Z. T. Connor, it is reported, will establish plant for the manufacture of chewing, twist and plug tobacco. Mr. Connor can be addressed in care of The 150,000 Club.

Dallas—Publishing.—John T. Worley Directory Co. has been incorporated with \$5000 capital stock by John T. Worley, Stephen J. Evans and others.

Dallas—Chemical Works.—Dr. W. J. Thurmond and Fred Turner will erect three-story building 50x66 feet at a cost of about \$15,000, to be occupied by the New York Chemical Co.

Fort Worth—Steel Fence Post, Wire Fencing, etc.—American Steel Fence Post & Manufacturing Co., mentioned last week as incorporated with \$25,000 capital stock, succeeds the American Steel Post & Fence Co., manufacturing wire fence and patent steel fence posts and fence stays for strengthening wire fences; office, 1214 Main street.*

Fort Worth—Lumber Company.—E. A. Henning, E. Cobb and F. C. Pope have incorporated the Western Lumber Co. with \$25,000 capital stock.

Fort Worth—Oil Wells.—Maverick Oil Co. has been incorporated with \$8000 capital stock by R. P. Smith, W. B. Paddock and others.

Fort Worth—Creamery.—Lawson Bros. will establish a creamery in North Fort Worth. A brick building will be erected.

Galveston—Ice Plant.—Galveston Brewing Co. is arranging for enlarging ice plant. Plans are being prepared for erection of fireproof building which will be equipped for increasing output by 100 tons daily; present capacity 75 tons. About \$100,000 will be expended in improvements.

Harlington—Irrigation Plant.—American Rio Grande Land & Irrigation Co., Rooms 510-511 Merchants-Laclede Building, St. Louis, Mo., has begun the construction of irrigation plant previously reported. A power-house 80x100 feet, at a cost of \$10,000, and pumping station to cost \$5000 is being constructed, and electrical equipment and turbine engines will be installed. Sugar-cane, alfalfa, cotton and all kinds of truck will be cultivated, and orange-peans and English walnuts will be grown. About 50,000 acres will be planted at once, which will be increased to 200,000 acres. A sugar mill will be constructed in about 18 months. Chester B. Davis, Harlington, Texas, is engineer in charge, and Barnett, Haynes & Barnett, St. Louis, Mo., architects.

Holland—Oil Wells.—S. H. Barton, J. W. Sellers, E. B. Bailey and others have incorporated the Holland Oil Co. with \$4000 capital stock.

Houston—Tie and Lumber Company.—Matthews Tie & Lumber Co. has been incorporated with \$10,000 capital stock by J. M. Matthews, J. W. Matthews and John G. Tod.

Houston—Steel-tank Plant.—It is reported that the Petroleum Iron Works Co. of Pittsburgh, Pa., is investigating with a view to establishing branch plant.

Houston—Oil Wells.—North American Oil Co. has been incorporated with \$4000 capital stock by J. C. McCue, S. W. De Vore and C. E. Barrett.

Houston—Lumber Company.—Incorporated: Donley County Lumber Co., with \$10,000 capital stock, by M. Newman, J. P. Ehrlich and O. V. Richardson.

Houston—Oil Wells.—D. A. Smith, A. D. Kent and W. D. Dummett have incorporated the Smith-Kent Oil Co. with \$6000 capital stock.

Louise—Cotton Gln.—T. N. Menefee, Jesse Larmore and others have incorporated the Louise Gln Co. with \$2000 capital stock.

Marfa—Mining.—Chartered: Canon Mining Co., with \$150,000 capital stock, by Charles S. Murphy, James Normand, James Walker and associates.

McCauley—Lumber Company.—Gray Lumber Co. has been incorporated with \$40,000 capital stock by A. W. Gray, G. C. Right and others.

Palestine—Light, Heat and Power Plant.—Incorporated: Palestine Light, Heat & Power Co., with \$400,000 capital stock, by John F. Fitzgerald, Charles W. Lucas, E. Chandler Beach, P. W. Brown and others.

Palestine—Sewerage System.—Chartered: Palestine Sewer System, with \$20,000 capital stock, by H. L. Wright, John R. Hearne and Tucker Royall.

Palo Pinto—Telephone System.—Chartered: Mont Zion & Lost Creek Telephone Co., with \$1000 capital stock.

Port Arthur—Lumber Company.—C. Kramer, G. Mensen and others have incorporated the C. Kramer Lumber Co. with \$20,000 capital stock.

Rusk—Iron Furnace.—It is reported that Philadelphia (Pa.) parties have purchased the Star and Crescent Furnace, A. B. Blevins, manager, and will have same overhauled and blown in at once; daily capacity to be 75 tons of iron, which will later be increased.

Rusk—Ice Plant.—Rusk Pure Ice Co., reported incorporated last week, has completed the erection of building and installed machinery for a daily capacity of 60 tons of ice. Plant will be in operation in about 10 days. W. R. Stevens is engineer in charge. L. D. Gulun is president; J. T. Wiggins, Jr., secretary and manager, and J. L. Summers, treasurer.

San Antonio—Mining, etc.—San Antonio Mining & Exploration Co. has been incorporated with \$100,000 capital stock by Otto Koehler, Otto Wahrmond and Charles Schreiner.

San Antonio—Cannery.—San Antonio Canning Co., previously reported incorporated with \$12,000 capital stock to can fruits, vegetables and Mexican dishes, will erect two-story factory building 40x60 feet, storeroom 60x30 feet, shed 40x50 feet and office building 16x18 feet. Between \$10,000 and \$12,000 will be expended in buildings and equipment. H. E. Hildebrand is president; L. C. Thompson, vice-president, and Udo Toepperwein, secretary.*

San Antonio—Mining.—Chartered: Texas-Mexican Mining Co., with \$100,000 capital stock, by Otto Koehler, O. S. Newell and others.

San Augustine—Lumber Company.—Chartered: Miller-Noble Lumber Co. has been incorporated with \$10,000 capital stock by J. Simpson Miller, I. L. Miller, W. S. Noble and others.

Smithville—Saw-mill.—Smithville Saw-Mill Co. has been incorporated with \$10,000 capital stock by E. Beuscher, E. H. Egglestone, J. H. E. Powell and others.

Spring—Saw and Planing Mill.—Barrett & Cline Lumber Co., Huntsville, Texas, will establish saw-mill with a daily capacity of 50,000 feet and planing mill with a capacity of 35,000 feet. It is proposed to erect a mill shed, 25x150 feet; rough dry shed, 50x150 feet; dry-kiln with a capacity of 20,000 feet in 24 hours. Machinery has been purchased. (This enterprise recently referred to.)

Tyler—Canning and Pickle Factory.—Claude Wiley, F. W. Madden and J. C. Linsey have incorporated the Tyler Canning & Pickle Co. with \$15,000 capital stock.

Waco—Bridge.—It is reported that the Cotton Belt & Northern Railroad has had surveys made for the construction of an entirely new bridge over the Brazos river; Wm. Carlisle, president and general manager, Atchison, Kan.

Waxahachie—Machine Shops.—Incorporated: Waxahachie Machinery Co., with \$16,500 capital stock, by A. H. Paillet, E. M. Murphy and W. L. Butler.

VIRGINIA.

Amherst—Road Improvements.—Board of Supervisors of Amherst county will call an election to vote on an \$80,000 bond issue for macadamizing county roads.

Appalachia—Coal Mines.—Incorporated: Black Mountain Mining Co., with an authorized capital stock of \$25,000. William Dickson of Knoxville, Tenn., is president; J. B. Caldwell of Inman, Va., secretary-treasurer.

Broadway—Sash, Door and Blind Factory.—Broadway Hardwood Manufacturing Co., mentioned recently as organized, will manufacture sash, doors and blinds. Two buildings will be erected, a main building 50x80 feet and an additional building 36x44 feet. About \$10,000 will be expended in buildings and equipments; Anthony Rhodes, manager.*

Danville—Electric-power Plant.—Danville Railway & Electric Co. has applied for 30-year franchise to operate electric-power plant.

Fredericksburg—Dredging.—Ernest L. Miner, Petersburg, Va., is lowest bidder at \$11,025 for dredging in Rappahannock river, Virginia.

Fredericksburg—Foundry and Machine Shop.—Acme Manufacturing Co. of New York, N. Y., it is reported, has purchased the plant of the Southern Foundry and Machine Works and will arrange for manufacturing a patent churn, wickless oil stoves and fire extinguishers, besides operating a regular foundry and repair shop.

Goshen—Iron Furnace.—Receivers for the Chapman Iron, Coal & Coke Co. will expend \$35,000 in improvements to the Victoria furnace for the resumption of operations, relining, installing new boilers and other im-

provements for a daily capacity of 160 tons of pig-iron. M. F. Bonzano is general manager, and E. B. Tenny, superintendent. (Previously mentioned.)

Norfolk—Coal and Iron Mines.—Chesapeake Coal & Iron Co. has been incorporated with an authorized capital stock of \$100,000. C. W. Tebault of Norfolk is president; Philip L. Grasty, secretary, and W. P. Bond, treasurer, both of Danville, Va.

Norfolk—Wooden and Metal Furniture.—Norfolk Art Furniture Co. has incorporated with an authorized capital stock of \$10,000 to manufacture all kinds of wooden and metal goods. W. H. Wales, Jr., is president; S. W. McCann, secretary-treasurer.

Orbit—Saw-mill.—It is reported that S. M. Morris will rebuild saw-mill reported burned last week.

Norfolk—Electric-power Plant.—Norfolk Railway & Light Co. is completing arrangements for the erection of electric-power plant mentioned last week. It will be located on the eastern branch of Elizabeth river and will be 10,500-kilowatt capacity, consisting of three 3000-kilowatt turbines of the Curtis type and one 1500-kilowatt machine of the same kind, for which contracts have been let. Contracts have also been let for electrical machinery, boilers, stokers, condensers, traveling cranes, etc. Contracts will be let in 10 days for building power-house, which will probably be of concrete. There will be two stacks each 200 feet above foundation. Present plant will become a substation, main lines being taken through underground conduit systems via Holt-street bridge to present point. Substations will be built in Portsmouth and Suffolk for lighting and railway. Coal-handling apparatus will be installed, including modified Gantry crane equipped with crushers. Coal will be dumped into bins which will run the full length of the station on the ground line and lifted from bins into crusher, and then into bunkers in the roof of boiler-house having a capacity of about 200 tons. E. C. Hathaway is general manager.

Pennington Gap—Iron Mines.—Virginia Lee Company has been incorporated with an authorized capital stock of \$100,000. A. Johnson is president, and J. C. Noel, secretary-treasurer.

Portsmouth—Knitting Mill.—Parker Hosiery Mill and Dye Works, Joseph A. Parker, proprietor, is building one-story addition to present plant, equipment to consist of 50 knitting machines, 10 sewing machines, etc. All contracts have been awarded.

Portsmouth—Terminals.—It is reported that the Atlantic Coast Terminal Co. is completing plans for the establishment of proposed freight and passenger terminals, for which property was recently purchased. It is stated that work on the construction of wharves, warehouses and piers will probably not be commenced for another year. J. W. Perry of Norfolk, Va., is president.

Richmond—Saddlery Factory.—Cottrell Saddlery Co. has had plans prepared by Architect Hewitt for the erection of proposed four-story fireproof brick and iron factory building on site recently purchased. It is proposed to equip plant for increasing present capacity.

Richmond—Laundry.—Chartered: Jefferson Laundry, with B. D. Kay, president, and D. A. Sanderlin, secretary-treasurer; capital stock \$10,000.

Roanoke—Land Improvement.—Allison Avenue Improvement Co. has been incorporated with an authorized capital stock of \$40,000. C. E. Michael is president; E. W. Speed, secretary-treasurer.

Roanoke Rapids—Paper and Pulp Mill.—Roanoke Rapids Paper Manufacturing Co. will be incorporated with \$150,000 capital stock for the erection of 20-ton paper and pulp mill which has been designed by Jos. H. Wallace. Water-power will be used to operate the plant; incorporators, A. H. Christian, Jr., E. B. Addison, T. C. Williams, Jr., W. M. Habblston, A. D. Williams, T. A. Cary, H. E. Baskerville, all of Richmond, Va.; T. L. Emory of Weldon, N. C., and W. S. Parker of Henderson, N. C. Mr. Christian will be president; H. A. Edwards, vice-president and treasurer, and W. C. Edwards, manager; Joseph H. Wallace of New York, N. Y., engineer in charge. Wrapping paper will be manufactured. Bids for plant and equipment are now being received; temporary office, Richmond, Va.*

Snow Creek—Mica-mining.—The Franklin Mines has begun mining mica on its property near Snow Creek.*

Suffolk—Electric-light and Ice Plant.—Norfolk & Portsmouth Traction Co. of Norfolk, Va., it is reported, has purchased and will operate the plant of the Suffolk Light & Ice Co.

Vienna—Limekilns.—Woodstock Lime Co. has been incorporated with \$20,000 capital

stock to operate limekilns with a daily capacity of 150 barrels. Dr. A. G. Coumbe is president; H. R. C. Shockey, secretary and treasurer.*

WEST VIRGINIA.

Benwood—Brewery.—Huetteman & Cramer Company, recently mentioned as having contract to erect brewery for the Benwood Brewing Co., is located at Mack avenue and Belt Line Railroad, Detroit, Mich.; building to be 234x200 feet and equipped for annual capacity of 35,000 barrels.

Charleston—Coal Mines and Coke Ovens.—Beury Coal & Coke Co., reported incorporated last week, is reorganization of the Echo Coal & Coke Co., and will operate along the same lines. F. C. Beury is president; J. E. Beury, vice-president; H. B. Beury, general manager and treasurer, and Tom Nichol, secretary.

Follansbee—Glass Factory.—It is reported that the Jefferson Glass Co. of Steubenville, Ohio, manufacturers of colored decorated tableware and novelties, has purchased site on which to erect glass plant.

Hinton—Steam Laundry.—J. A. Fox, Earl D. Fox, E. J. Grummedd and others have incorporated the Hinton Steam Laundry Co. with \$50,000 capital stock.

Kingwood—Brick Works.—Preston Brick Co. has been incorporated with \$5000 capital stock by A. Bliss McCrum, R. W. Munroe, C. F. Shaw and others.

Logan—Coal Mines and Coke Ovens.—Chartered: Odd Coal & Coke Co., with \$25,000 capital stock, by G. H. Bolen of Logan, L. C. Jackson, Lester Jackson, Levi Bolen, all of Kimball, W. Va., and associates.

Logan—Coal Mines and Coke Ovens.—Ethel Coal Co. has incorporated with \$100,000 capital stock to mine coal and manufacture coke; incorporators, C. A. Devenny, Harry Bowen, J. C. Pack and H. S. Brown.

Martinsburg—Limestone Quarries.—Incorporated: Berkley Limestone Co., with \$100,000 capital stock, by Charles Warner, Alfred D. Warner and others.

Parkersburg—Woodworking Plant.—Ohio Valley Bending Co. has been organized with John M. Crawford, president; J. B. Finley, secretary, and G. H. Caverex, treasurer, to take over, enlarge and operate the plant of the Parkersburg Bending Co.

Princeton—Timber Development.—It is reported that the Bluestone Land & Lumber Co. is arranging for the development of several thousand acres of timber land which it owns on Bluestone river near Princeton. William Sharpe of Ridgeway, Pa., is secretary of the company.

Richwood—Ice Plant.—Richwood Ice Co. has been incorporated with \$25,000 capital stock by J. W. Vredenburg, E. A. Gensman, V. H. Odell and associates.

Salem—Street-paving.—Town has voted affirmatively the proposed bond issue for street-paving. Address Town Clerk.

Sistersville—Mineral Lands.—Robert McCormick, W. L. Armstrong, W. J. Nauenschwander, H. W. McCoy and E. A. Regan have incorporated the McCormick Company with an authorized capital stock of \$10,000.

St. Albans—Woodworking Plant.—McGregor Manufacturing Co., R. B. McGregor, superintendent, manufacturer of columns, brackets, etc., will enlarge plant at a cost of \$15,000.

Williamson—Coal Mines, etc.—Incorporated: Mingo-Martin Coal Land Co., with \$25,000 capital stock, by R. B. Parrish and Everett Leftwich, both of Williamson; L. Merrill, W. A. Williams of Huntington, W. Va., and others.

INDIAN TERRITORY.

Henryetta—Power Plant.—Coal Creek Power Co. has been organized with \$10,000 capital stock by W. N. Martin and William Stockleberg to build a power plant.

Paul's Valley—Cotton Compress.—Paul's Valley Compress Co. is reported as to expend \$10,000 in improvements.

South McAlester—Coal Mines.—McAlester-Edwards Coal Co. has been formed with \$500,000 capital stock by E. S. Rea of Coffeyville, Kan.; W. H. Powell and John T. Heard of Sedalia, Mo.; John Mayer of Kansas City, Mo., and associates to take over the coal leases of D. Edwards & Son, containing 1920 acres of coal land. It is proposed to make improvements to plant, increasing the present output of 20 tons daily. Mr. Rea will be president of the company.

Tulsa—Oil and Gas Wells.—Incorporated: Minshall Oil & Gas Co., with \$50,000 capital stock, by H. M. Preston of Warren, Pa.; W. S. Haskins, B. A. Koblegerd, T. F. Koblegerd of Weston, W. Va., and R. N. Koblegerd of Clarksburg, W. Va.

OKLAHOMA TERRITORY.

Alva—Mill and Elevator Company.—Incorporated: Alva Mill & Elevator Co., with \$20,000 capital stock, by George A. Harbaugh, E. M. Blue and others.

Clinton—Telephone System.—Chartered: Clinton Mutual Telephone Co., with \$1000 capital stock, by T. G. Cope, J. D. Kitchell and F. A. Wadleigh.

El Reno—Brick and Tile Works.—El Reno Brick & Tile Co. has been incorporated with \$25,000 capital stock by R. S. Trulock, W. T. Beeks and associates.

Frederick—Water-works.—Town has voted affirmatively the proposed bond issue for constructing water-works. Address The Mayor.

Heaston—Telephone System.—Chartered: Heaston & El Reno Telephone Co., with \$5000 capital stock, by W. D. McKay of Heaston, Charles Bradley, J. W. Cordray and associates of El Reno, O. T.

Lawton—Broom Factory.—E. J. Crites has purchased the broom factory of the Lawton Ice & Fuel Co. and will incorporate the Crites Broom Co. with \$5000 capital stock for its operation. It is proposed to later double the present capacity of 50 brooms daily.

Oklahoma City—Cotton Compress.—It is stated that John H. Wright, attorney, represented the Traders' Compress Co. in the recently-mentioned purchase of six acres of land on which to locate cotton compress at a cost of \$75,000.

Sayre—Telephone System.—Chartered: Modern Telephone Co., with \$10,000 capital stock, by D. E. Grubbs, O. J. Ivester, L. P. Jones and others.

Stillwater—Mill and Elevator Company.—Stillwater Mill & Elevator Co. has been incorporated with \$50,000 capital stock by C. F. Babcock, S. W. Keiser and Peter Babcock.

Sweetwater—Cotton Gin, Grist Mill, etc.—Frank Banks, George J. Coburn, Sam McCord and associates have incorporated the Sweetwater Gin, Mill & Fuel Co. with \$7000 capital stock.

Tecumseh—Water-works and Electric-light Plant.—City has voted affirmatively the \$60,000 bond issue previously reported for constructing water-works and electric-light plant. The O'Neill Engineering Co., Dallas, Texas, was mentioned in March as preparing plans and specifications for water-works.

Temple—Thrashing Machine.—Incorporated: The Cache Creek Thrashing Machine Co., with \$2000 capital stock, by C. O. Ray, J. T. Smyers and C. O. Oliver.

Woodward—Land Improvement.—Incorporated: Simmons Bros. Land Co., with \$25,000 capital stock, by Horace F. Simmons, Seth H. Simmons and others.

Yukon—Cotton Gin.—M. D. Barrett will erect a two 70-saw cotton gin. About \$3500 will be invested.

BURNED.

Anderson, S. C.—Anderson Water, Light & Power Co.'s electric plant at Portman Shoals; loss \$300,000.

Atlanta, Ga.—The report mentioned recently that the trunk factory of the Atlanta Trunk Co. was destroyed by fire is entirely erroneous, the fire referred to being at the retail store of the company.

Ball, La.—Ball Lumber Co.'s plant; loss \$50,000.

Burkeville, Va.—Burkeville Stave Manufacturing Co.'s plant; loss \$6000.

Frankfort, Ky.—Kentucky River Mills Co.'s hemp warehouse.

Gulfport, Miss.—New Orleans Naval Stores Co.'s plant; S. Shott & Co.'s plant.

Little Rock, Ark.—Little Rock Basket Co.'s plant; loss \$25,000.

Magee, Miss.—Burnham Bros.' saw-mill, loss \$3000; Magee Gin Co.'s plant, loss \$5000.

Ocala, Ga.—George Hotel; loss \$6000.

Offerman, Ga.—Southern Pine Lumber Co.'s plant; loss \$20,000.

Paris, Texas.—R. J. Murphy Drug Co.'s building; Bedford & Cook Company's building.

Roanoke, Va.—Thomas Lowe & Co.'s furniture store; loss \$25,000.

Sanford, N. C.—Sanford Sash & Blind Co.'s factory; loss \$30,000.

St. Louis, Mo.—Vane-Calvert Paint Co.'s plant; loss \$40,000.

Westville, Texas.—West Lumber Co.'s saw-mill.

Capital and Services Wanted.

Mr. Gardner L. Boothe of Alexandria, Va., seeks to interest someone to invest \$10,000 and take an active part in conducting a shoe-manufacturing enterprise. Write for details.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Anderson, S. C.—Theater.—Dr. George E. Coughlin and others will erect theater to have a seating capacity of 1200 to 1500 and cost \$25,000.

Ardmore, I. T.—Opera-house.—S. S. Baldwin of Wichita, Kan., manager of the Bijou Vaudeville Circuit, has secured site on which to erect opera-house.

Ashburn, Ga.—Jail Building.—Wagner & Dodson, Montgomery, Ala., have contract to erect proposed jail building for Turner county.

Atlanta, Ga.—Store Building.—Morgan & Dillon have completed plans for proposed building for M. Rich & Bros. Company; four stories, 65x230 feet; brick; steam heat; electric fixtures.

Atlanta, Ga.—Theater.—The Bijou Company, Jake Wells, Richmond, Va., president, has secured site and is having plans prepared by Fuller Clafflin, 1440 Broadway, New York, N. Y., for the erection of theater; to be 100x127 feet; seating capacity 1800; cost \$90,000.

Augusta, Ga.—School Building.—Lawton B. Evans, secretary board of education, will receive bids until May 28 for erection of school building in the Fifth ward in accordance with plans and specifications on file at office of L. F. Goodrich, architect. Usual rights reserved.

Baltimore, Md.—Dwellings.—E. C. Lawrence, builder, 423 East 25th street, will erect eight two-story brick dwellings on Montford avenue near Chase street.

Baltimore, Md.—Dwellings.—James Y. Miller, builder, 2109 Bolton street, will erect seven three-story brick dwellings on Calvert street between 29th and 30th streets to cost about \$35,000; John R. Forsythe, architect, 411 St. Paul street.

Baltimore, Md.—Dwellings.—Francis E. Yewell, 301 St. Paul street, will erect two dwellings at corner Calvert and 29th streets; three stories, 20x80 feet; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; heating systems; cost about \$15,000; John R. Forsythe, architect, 411 St. Paul street.

Baltimore, Md.—Office Building.—The Mutual Benefit Society, 712 South Sharp street, has awarded contract to W. F. Ludwig, 1000 West Lafayette avenue, for the construction of two-story brick office building at northeast corner Fayette and Pine streets to cost about \$5000.

Baltimore, Md.—Dwellings.—Augustus Clemens, Jr., 1025 York road, has awarded contract to A. K. Wood, Markland avenue near York road, for the construction of 12 two-story brick dwellings on Abell street near 32d street to cost about \$18,000.

Baltimore, Md.—Executive Building.—Sealed proposals will be received until May 17 for erecting an addition to the executive building of the United States Marine Hospital. Plans and specifications may be obtained from L. L. Williams, surgeon and custodian United States Marine Hospital, Baltimore, Md.

Baltimore, Md.—Parsonage.—The Alsquith Presbyterian Church, David T. Neely, pastor, 1641 North Caroline street, will erect parsonage; three stories, 15x60 feet; brick with stone trimmings; tin roofing; electric wiring and fixtures; sanitary plumbing; heating system; cost about \$5000. Willis & Mason, builders, 324 West Biddle street, are estimating on construction.

Baltimore, Md.—Dwellings.—John F. Carter, builder, Park Heights avenue, will erect 14 two-story brick dwellings on Druid Hill avenue near Whitelock street to cost about \$15,000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Baltimore, Md.—Dwellings.—August Weber, president of the German Bank, Baltimore and Holiday streets, has purchased lot at Luzerne and Hoffman streets and will erect a number of two-story brick dwellings on the site, which is 400x190 feet.

Baltimore, Md.—Terminal Station and Warehouses.—The Maryland & Pennsylvania Railroad Co., James S. Norris, general manager, North avenue and Oak street, has purchased additional land in the vicinity of its present station and will erect fireproof station and terminal warehouses on the site. Architects have not as yet been selected.

Baltimore, Md.—City Buildings.—Sealed proposals, addressed to the Board of Awards, City Hall, will be received until May 29 at office of Harry F. Hooper, city register, City Hall, for constructing the following city buildings: School at Garrison and Maine ave-

nues, two stories, 83.8x63.2 feet, brick with stone trimmings, steel beams, cast-iron columns, tin roofing, sanitary plumbing, steam-heating system; administration building, Bayview, three stories, 35x130 feet, brick with stone trimmings, steel beams, cast-iron columns, tin roof, electric wiring and fixtures, sanitary plumbing, steam-heating system; hay barracks, one story, 40x60 feet, frame construction; sterilizer building, one story, 15.6x30 feet, frame construction; farmer's house, 2½ stories, 24x32 feet, frame construction, electric wiring and fixtures; building at 27 South Frederick street, two stories, 32x38 feet, brick, steel beams and columns, slag roof, electric wiring and fixtures. Plans and specifications for any of the above buildings may be obtained from office of Edward D. Preston, inspector of buildings.

Baltimore, Md.—Dwellings.—Edward J. Storck, 86 Gunter Building, Fayette and St. Paul streets, will erect 16 dwellings on Gorsuch avenue near Independence street to cost about \$24,000; two stories, 15x46 feet; brick with marble trimmings; cement roofing; hot-air-heating systems.

Baltimore, Md.—Dwelling.—James E. Carr, 727 Law Building, Courtland near Lexington street, has awarded contract to M. L. Wright, Eutaw and McCulloh streets, for the construction of 2½-story frame dwelling, 36x56 feet, at Garrison and Beech avenues, to cost about \$8000.

Baltimore, Md.—Dwellings.—H. C. Darrell, 702 Fidelity Building, Charles and Lexington streets, has awarded contract to T. Milton Jones, 1520 Light street, for the construction of 22 two-story brick dwellings on Patapsco street near Fort avenue to cost about \$30,000.

Baltimore, Md.—Warehouse.—Alexander Yearley & Son, Builders' Exchange Building, 2 East Lexington street, as agents, have awarded contract to McIver & Piel, Builders' Exchange Building, for the construction of warehouse at 404 South Charles street; four stories, 20x60 feet; brick with stone trimmings; steel beams; slag roof; galvanized-iron cornice; sanitary plumbing; elevator; J. Appleton Wilson, architect, Law Building, Courtland near Lexington street.

Baltimore, Md.—Dwellings.—Joseph L. White, builder, 115 South Broadway, will erect 20 two-story brick buildings on Baltimore near Potomac streets to cost about \$30,000. Heating systems will be installed.

Baltimore, Md.—Dwelling.—Stanley Zell of Motor Car Co., Maryland and Mt. Royal avenues, has awarded contract to Gladfelter & Chambers, 2072 Woodberry avenue, for the construction of 2½-story frame dwelling at Roland Park. Electric wiring and fixtures, sanitary plumbing and heating system will be installed; Owens & Sisco, architects, Continental Building, Baltimore and Calvert streets.

Baltimore, Md.—Dwellings.—Michael W. Ganzhorn, 13 Hopkins Place, has commissioned George Clothier, Jr., architect, Lobe Building, 15 South Gay street, to prepare plans and specifications for three frame dwellings to be erected on Augusta avenue near Massachusetts avenue; 2½ stories, 32x60 feet; electric wiring and fixtures; sanitary plumbing; hot-air-heating system.

Baltimore, Md.—Dwellings.—C. E. Spalding, 213 Courtland street, has purchased about two blocks of land bounded by Monroe, Payson, Mulberry and Saratoga streets and will erect about 150 brick dwellings on the site.

Baltimore, Md.—Warehouse.—O. F. H. Warner & Co., wholesale paper dealers, 15-19 East Camden street, have purchased lot at 104 and 106 East Lombard street and will erect warehouse on the site, which is 46.4x135 feet.

Baltimore, Md.—Storage Warehouse.—Wm. J. Tickner & Sons, 421-425 West Camden street, have purchased lot on Perry street between Eutaw and Little Paca streets and will erect storage warehouse on the site.

Baltimore, Md.—Dwelling.—Mrs. Emma L. Gall, 2301 Eutaw Place, has commissioned Wyatt & Nolting, architects, Builders' Exchange Building, 2 East Lexington street, to prepare plans and specifications for dwelling to be erected at Roland Park to cost about \$20,000.

Baltimore, Md.—Dwelling.—Jacob S. Detrick, 508 East Preston street, has purchased lot at Roland Park, and, it is reported, has commissioned Walter L. Price, 731 Walnut street, Philadelphia, Pa., to prepare plans and specifications for dwelling to be erected on the site.

Baltimore, Md.—Dwellings.—George A. Cook, builder, Washington street near Lafayette avenue, will erect 30 three-story brick dwellings on Calvert street between 27th and 28th streets.

Baltimore, Md.—Dwellings.—Frank Foreman, builder, 1409 East Lexington street, will erect 146 two-story brick dwellings on East Baltimore street extended; Wm. A. Foreman, architect, 1002 East 20th street.

Baltimore, Md.—Bank.—Referring to bank building to be erected at southwest corner Charles and Saratoga streets by the Metropolitan Savings Bank, Calvert and Lexington streets, the following contractors are estimating on construction: Edward Brady & Son, 1113 Cathedral street; Wells Bros. Company, Union Trust Building, Charles and Fayette streets; George A. Fuller Company, American Building, Baltimore and South streets; John Hiltz & Son, 3 Clay street; John Stack & Sons, 250 West Preston street; D. W. & G. H. Thomas, Vickers Building, 225 East German street; Henry Smith & Sons Company, 116 South Regester street; Brady & Watters, 532 St. Paul street, and John Waters, 23 East Centre street, all of Baltimore, and Norcross Bros. Company, Colorado Building, 14th and G streets N. W., Washington, D. C.; one story, 110 feet frontage; exterior of granite or granite base and marble or limestone; reinforced-concrete skeleton construction; Guastavino or concrete dome; terra-cotta partitions; galvanized-iron frames and sashes; metal doors; ornamental bronze and iron; interior marble; metal furring and lathing; composition and copper roofing; copper skylights. Heating and ventilating, plumbing, electrical work, bank grille, vault doors and clock not included in contract; bids to be in May 21; Parker & Thomas, architects, Union Trust Building, Charles and Lexington streets.

Baltimore, Md.—Store Building.—Mrs. Jennett Myers has awarded contract to John T. West, 407 Hoffman Building, 11 East Lexington street, for the construction of store building at 14 East 21st street; three stories, 18x70 feet; brick with stone trimmings; steel beams; tin roof; sanitary plumbing; heating system; cost about \$6000; Clarence E. Anderson, architect, Law Building, Courtland near Lexington street.

Baltimore, Md.—Dwelling.—B. Frank DeFord, Calvert and Lombard streets, has awarded contract to John T. West, 407 Hoffman Building, 11 East Lexington street, for the construction of three-story addition, 22x23 feet, and one-story addition, 17x23 feet, to dwelling at northwest corner Eager and St. Paul streets to cost about \$6000; Clarence E. Anderson, architect, Law Building, Courtland near Lexington streets.

Baltimore, Md.—Dwellings.—Charles J. F. Steiner, 124 North Lakewood avenue, will erect seven two-story brick dwellings on Walkbrook avenue near 7th street to cost about \$11,000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Bentonville, Ark.—Hotel.—Matthews & Clarke, Rogers, Ark., are preparing plans for a two-story tourist hotel, 55x150 feet; brick and stone; electric lights; hardwood finish; modern plumbing; cost \$15,000; W. W. Burks, chairman building committee, Fidelity Bank.

Birmingham, Ala.—Building.—F. Calhoun has secured permit for the erection of proposed two-story stone-vener building to cost \$11,600.

Birmingham, Ala.—Temple.—The Shriners of Alabama are arranging for a home for Zamora Temple, and a company has been incorporated by W. W. Ransom, M. T. Stradford and others with \$5000 capital stock to erect building.

Blacksburg, S. C.—Church.—Bids will be received until June 1 for the erection of cement-block edifice for the Blacksburg M. E. Church. Plans and specifications can be seen at the office of W. E. Anderson, chairman of building committee. Usual rights reserved.

Blackstone, Va.—School Building.—J. E. McDaniel has contract to erect school building, previously reported; brick with slate roof, 40x80 feet; ordinary construction; furnace heat; cost \$10,000.

Bokehito, I. T.—School Building.—City has voted affirmatively the \$6500 bond issue for the erection of school building. Address The Mayor.

Bowling Green, Ky.—Dwelling.—B. F. Cahell will erect a two-story stone residence at a cost of \$5000. Architect has not been selected.

Bowling Green, Ky.—Hotel Improvements. Bids will be received until May 24 at the office of J. Friedlander, architect, for improvements to Mansard Hotel; plans and specifications on file at architect's office. Certified check for 5 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Bonham, Texas.—Warehouse.—Southern Cotton-Growers' Association is considering the erection of a cotton warehouse. Address W. J. Hood.

Brunswick, Ga.—Courthouse.—Glynn County Commissioners will receive bids until June 26 for construction of courthouse. Plans and specifications on file at office of commissioners, Brunswick; at office of county commissioners of Fulton county, Atlanta, Ga., and

at offices of Charles A. Gifford and Edward S. Betts, associate architects, 18 East 17th street, New York. A set of plans and specifications will be furnished by J. J. Lott, chairman, and A. O. Townsend, clerk, Brunswick, on deposit of \$25. Full information furnished on application to the clerk of commissioners.

Charleston, W. Va.—Association Building.—W. Fletcher Daum, building secretary, P. O. Box 578, wants bids on the erection of a four-story brick and stone Y. M. C. A. Building 90x100 feet; plans ready June 25.

Chattanooga, Tenn.—Hotel.—Chattanooga Hotel Co. has been organized with \$100,000 capital stock by J. B. Pound, W. B. Mitchell and associates to operate hotel previously reported to be erected by Stone Fort Land Co.; eight stories; fireproof construction; modern plumbing; electric lights; cold-storage and ice plant; two passenger and one or more freight elevators.

Chattanooga, Tenn.—Building.—T. G. Montague will erect a three-story building at a cost of \$12,000, and has secured permit.

Chattanooga, Tenn.—Warehouse.—S. S. Price has secured permit for the erection of proposed \$12,000 warehouse.

Chattanooga, Tenn.—Depot.—Donn Barber, 24 East 23d street, New York, N. Y., has been commissioned to prepare plans for terminal depot previously reported to be erected by the Chattanooga Station Co. W. D. Jenkins, News Building, is engineer in charge.

Chickasha, I. T.—Church.—Congregational Church has had plans prepared for a \$10,000 edifice. Address The Pastor.

Chillicothe, Texas.—Store Building.—T. S. Gibbs has plans for a fireproof store building, and bids for the erection will be received until May 20.

Chillicothe, Texas.—Dwelling.—T. S. Gibbs has plans for a two-story brick and concrete residence.

Columbus, Miss.—Dwellings.—Stansel & Bramlett have prepared plans for residences to be erected by A. A. Passolt and T. W. Harris; cost \$5000 each.

Columbus, Miss.—Store Building.—Arthur Stansel has contract to remodel store building for J. M. Morgan after plans by Stansel & Bramlett; cost \$7000. An electric elevator will probably be installed.

Columbus, Miss.—Lodge Building.—J. W. Stansel is lowest bidder for remodeling lodge building for the I. O. O. F., recently mentioned; cost \$11,000.

Columbia, Mo.—Association Building.—Bids will be opened about June 10 for building mentioned recently to be erected by the Young Men's Christian Association, Charles F. Karnopp, general secretary; 90x125 feet; steam heat; gas and electric fixtures; cost \$50,000.

Dallas, Texas.—Dwelling.—J. E. Flanders has prepared plans and is receiving bids for a two-story frame residence.

Dallas, Texas.—Store Building.—H. A. Overbeck has prepared plans and is taking bids for a one-story brick building, 98x82 feet, to be erected by Mrs. E. Cornette.

Dallas, Texas.—Dwelling.—L. R. Wright has contract to erect two-story brick residence for Simon Linz after plans by Lang & Witchell; cost \$15,000.

Dallas, Texas.—Building.—Boyd & Dyer have contract to erect building for the Lake Cliff Rink Co., previously reported; two stories, 115x106 feet; mill construction; 2000 incandescent and 20 arc lights; cost \$17,000; Moore & Welles, architects.

Dallas, Texas.—Building.—H. A. Overbeck has prepared plans and is taking bids on a cement-stone entrance building to the Fair Park.

Denton, Texas.—Dormitory.—Harris & Craft have contract at \$18,000 for the erection of proposed dormitory for the College of Industrial Arts.

Easton, Md.—School Building.—Arrangements are being made for the erection of a convent school and sisters' house for Sts. Peter and Paul's Catholic Church; cost \$20,000. Bishop J. J. Monaghan of Wilmington, Del., can be addressed.

Fort Smith, Ark.—School Building.—Zimmerman & Jones have contract at \$8900 for erection of addition to Belle Grove school.

Fort Smith, Ark.—Office Building.—W. H. Blakely has prepared plans for three-story brick building, 25x100 feet, for the Kelley Trust Co., agent; ordinary construction; steam heat; electric elevators; cost \$15,000.

Fort Worth, Texas.—Store Building.—Mrs. Sherman Horn will erect a brick store building in North Fort Worth.

Fort Worth, Texas.—Office Building.—J. C. Ingram will erect a five-story office building.

Gadsden, Ala.—Church.—W. T. Christopher has contract to erect edifice for the First

Baptist Church, recently mentioned; brick and stone, 40x60 feet; ordinary construction; cost \$6000; A. D. Simpson, architect.

Graham, Va.—Bank Building.—R. K. Crockett, cashier Bank of Graham, will receive bids until May 22 for erection of brick and stone bank building. Plans and specifications on file at bank.

Greenville, S. C.—Bank Building.—Bank of Commerce, B. A. Morgan, president, has had plans prepared for brick building.

Hammond, La.—Masonic Temple.—Building Committee, J. B. Adams, chairman, will receive bids until June 1 for the erection of Masonic temple. Plans and specifications can be seen at the Grand Secretary's room in Masonic Temple, St. Charles street, New Orleans, La. Usual rights reserved.

Hammond, La.—Hotel.—A. Monteleone of the Commercial Hotel, New Orleans, La., it is reported, will erect a \$40,000 hotel.

Haskell, I. T.—School Building.—Town is reported to issue \$10,000 of bonds for school building. Address Town Clerk.

Havre de Grace, Md.—Masonic Temple.—C. C. Smith, Stafford, Md., is lowest bidder at \$14,144.90 for the erection of Masonic temple previously mentioned.

Houston, Texas.—Church.—Trustees of St. Paul's Methodist Church have purchased additional site on which to erect proposed \$75,000 brick and stone edifice.

Hope, Ark.—School Building.—R. E. Hewitt, Peoria, Ill., has been commissioned to prepare plans for proposed \$25,000 brick school building.

Hundred, W. Va.—Bank Building.—A. D. Ayers, chairman building committee, Lock Box 6, will receive bids until May 21 for the erection of bank building. Plans and specifications may be seen at the home of the architect, Wm. A. Stevens, West Alexander, Pa.

Huntsville, Texas.—School Building.—C. H. Page, Jr., Austin, Texas, is preparing plans for two-story brick school building to be erected at a cost of \$22,500. Hot-air-heating plant and electric fixtures will be installed. W. W. Adickes is president of school board.

Jamestown, Va.—Church.—Association for Preservation of Virginia Antiquities, Richmond, Va., has had plans prepared by Architect Wheelwright, Boston, Mass., for remodeling and improving church. About \$8000 will be expended.

Johnson City, Tenn.—School Building.—City will vote June 5 on a \$17,500 bond issue for school purposes. Address The Mayor.

Kansas City, Mo.—Lodge Building.—The West End Nordens Vanner have secured permit for the erection of a three-story brick building 80x50 feet to cost \$13,500.

Kansas City, Mo.—Business Building.—B. R. Lee and J. T. Sears have purchased site on which to erect two-story building to cost \$15,000.

Kingstree, S. C.—Cotton Warehouse.—Kingstree Warehouse Co. has been organized with \$10,000 capital stock to erect cotton warehouse. R. H. Kellahan is president; W. D. Bryan, vice-president, and M. F. Heller, secretary-treasurer.

Lexington, Ky.—Dwelling.—Richards, McCarty & Bulford, Columbus, Ohio, are preparing plans for residence mentioned last week for Louis des Cognets; brick; mill construction; cost \$25,000.

Little Rock, Ark.—Business Building.—Thomas Lafferty is having plans prepared by Charles L. Thompson for erection of two-story building, 100x100 feet, with granite front.

Little Rock, Ark.—Reform School.—Avery E. Moore, chairman building committee, will receive bids until July 12 at office of board of penitentiary commissioners for construction of Reform School on site five miles from city. Plans and specifications may be seen at office of Joe C. Moore, secretary; also at office of Gibb & Sanders, architects. Certified check for \$500 must accompany each bid. Usual rights reserved.

Live Oak, Fla.—Hotel.—A company being organized by Lee Humphreys and associates has adopted plans for the erection of a five-story hotel.

Louisville, Ky.—Hotel Improvements.—Seelbach Company is completing arrangements for the erection of proposed \$100,000 annex to hotel, and contracts for the construction will shortly be let.

Knoxville, Tenn.—Building.—Thomas & Turner have contract to erect building for George E. Helm, H. M. and S. M. Johnston; six stories, 52x118 feet; brick; pressed-steel ceiling; electric freight elevators. King Mantel Co. will occupy the building.

Knoxville, Tenn.—Telephone Exchange.—Plans by Thompson, Gibb & Asmus, Nashville, Tenn., have been adopted for proposed 40-foot addition to exchange of the East Ten-

nessee Telephone Co., and bids will shortly be asked. New equipment will be installed.

Knoxville, Tenn.—Building.—Brimer & England have begun the construction of building for H. C. Bondurant, for which they have been awarded contract; four stories, of brick, and cost \$11,500.

Lambert's Point, Va.—Association Building. T. W. Kirkbride, Roanoke, Va., has contract to erect two-story Young Men's Christian Association building for Norfolk & Western Railway.

Lebanon, Va.—Dwelling.—Anthony Rainor has contract to erect residence for R. S. Meade, for which Holmboe & Lafferty, Bluefield, W. Va., were recently mentioned as preparing plans; stone; semireproof construction; hot-water-heating plant; electric lights; cost \$10,000.*

Leesburg, Va.—Bank Building.—Citizens' Bank of Leesburg, recently organized with J. A. Sasser of Atlanta, Ga., president, will erect brick building.

Lockhart, Texas.—School Building.—City has voted affirmatively the \$15,000 bond issue mentioned last month for the erection of school building; E. M. Storey, mayor.

Logan, W. Va.—Bank Building.—Logan National Bank, Scott Justice, president, will open bids May 21 for erection of three-story brick and stone bank and office building according to plans and specifications on file at the bank, also at office of Rabenstein & Warne, architects, Charleston, W. Va., and office of Huntington (W. Va.) Advertiser. Bond in the sum of \$3000 must accompany each bid. Usual rights reserved.

London, Ky.—School Building.—An \$8000 bond issue will be voted on for the erection of school building. Address The Mayor.

Malone, Texas.—School Building.—Town will vote June 4 on issuance of \$7000 of bonds for erecting school building. Address Town Clerk.

Marshall, Texas.—City Hall and Market-house.—Plans are wanted for a city hall and market-house combined. Address Dan Heyer, mayor.

McRae, Ga.—Dormitory.—South Georgia College is having plans prepared by Alexander Blair for proposed \$10,000 dormitory.

Memphis, Tenn.—Apartment-house.—Henry Hurst is arranging for the erection of a \$35,000 apartment-house.

Memphis, Tenn.—Store Building.—W. T. Murray has contract to erect brick store building, 25x100 feet, for Drake Bros.

Memphis, Tenn.—Dwelling.—Craft & Hise have contract to erect W. H. Leveille's proposed two-story stone-veneered residence; cost \$5000.

Memphis, Tenn.—Coliseum.—Jack Prince, controlling coliseums in Atlanta, Ga.; Birmingham, Ala., and Nashville, Tenn., is investigating site for the location of a similar building in Memphis. It is proposed to erect a building with a seating capacity of 12,000; 24 arches to support the roof, which will be illuminated by 2000 16-candle-power incandescent lights.

Meridian, Miss.—Warehouse.—P. J. Krouse, Milazzo & Woods Building, is preparing plans for warehouse to be erected by Marks Rothenberg; seven stories; press brick; galvanized-iron cornice; gravel roof; mill construction; plate and prism glass; wireglass; metal frames; freight elevator.

Mexico, Mo.—School Building.—City has voted an additional school levy for the erection of a \$50,000 high-school building. Address The Mayor.

Mill Creek, I. T.—School Building.—Town will vote on the issuance of \$10,000 of bonds for erecting school building. Address The Mayor.

Milltown, Ga.—School Building and Dormitories.—Little & Phillips, Cordele, Ga., have contract to erect two-story brick and concrete school building and two dormitories for the Valdosta Baptist Association; cost \$37,000; Alexander Blair, Macon, Ga., architect.

Mineral Wells, Texas.—Building.—Taylor & Mount have prepared plans and are taking figures on a three-story brick building, 50x100 feet, to be erected by B. H. Lattner.

Mineral Wells, Texas.—Dwelling.—R. K. Wiley of Ballinger, Texas, has let contract for erection of \$20,000 residence.

Mobile, Ala.—Clubhouse.—George B. Rogers is preparing plans for clubhouse, previously reported, for Mobile Yacht Club, three and one-half miles from city on Mobile bay; two stories, 60x60 feet; frame; ordinary construction; electric lights; cost \$10,000. Contract for construction will probably be let within two weeks. L. C. Dorgan is secretary.*

Mountain View, O. T.—School Building.—Citizens' Building Co. has been incorporated with \$10,000 capital stock by H. A. Lamber-

son, S. M. Coker and others to construct a school building.

Murray, Ky.—Courthouse.—Fiscal Court of Callaway county has ordered an election for November 6 to vote on issuing \$35,000 courthouse bonds. Courthouse was mentioned last month as burned.

Nashville, Tenn.—College Building.—American Baptist Home Mission Society of New York, N. Y., has secured site on which to rebuild Roger Williams University; H. L. Morehouse, corresponding secretary.

Nashville, Tenn.—Dwelling.—A. E. Potter is having plans prepared by C. Ferguson for erection of proposed two-story frame residence to cost \$5000.

Nashville, Tenn.—Warehouse.—The warehouse to be erected by the Wholesale Merchants' Warehouse Co., for which the Oliver Company, Knoxville, Tenn., was previously reported as having contract, will be four stories, 500x132 feet; fireproof; reinforced concrete; steam heat; electrical equipment for elevators and light; cost \$330,000.

Newberry, S. C.—Church.—Bids will be received until June 5 for erection of edifice for First Baptist Church. Plans and specifications on file at office of R. Y. Leavell, secretary-treasurer; also at office of Chas. C. Wilson, architect, 1302 Main street, Columbia, S. C. Usual rights reserved.

New Orleans, La.—School Building.—Plans are being prepared for a two-story brick and terra-cotta annex for Isidore Newman Manual Training School to cost \$25,000.

New Orleans, La.—Lodge Building.—Woodmen of the World are arranging for the erection of six-story lodge and office building. It is proposed to organize a company with \$150,000 capital stock for this purpose, and a committee has been appointed with O. A. Levy, chairman.

New Orleans, La.—Office Building.—W. T. Carey & Bros. have contract to erect office building for the Equitable Real Estate Co. after plans by D'iboll & Owens.

New Orleans, La.—Store Building.—Henry Denis will ask bids at once for the erection of one-story pressed-brick building to contain six stories; J. L. Onorato, architect.

Norfolk, Va.—Store and Dwelling.—J. D. Anders has contract to erect two-story brick store and residence for Dr. Samler; cost \$7200.

Norfolk, Va.—Hotel.—All bids for the erection of Victoria Hotel, recently mentioned, have been rejected, and the work will be done by day labor under the supervision of George T. Banks; Ferguson & Calrow, architects; six stories, 56x142 feet; brick and stone with terra-cotta trimmings. Gregory & Williams were recently mentioned as lowest bidders.

Norfolk, Va.—Apartment-house.—J. D. Anders is reported as lowest bidder for the erection of the Stratford apartments, for which Neff & Thompson prepared the plans.

Oakdale, La.—School Building.—Bids will be received until May 28 at office of John McNeese, chairman parish building committee, for erection of school building. Plans and specifications may be seen at office of I. C. Carter, architect, and at office of building committee.

Oklahoma City, O. T.—Warehouse and Office Building.—The building to be erected by Deere & Co., Moline, Ill., for which the Leonard-Martin Construction Co., 802-803 Monadnock Block, Chicago, Ill., was mentioned last week as having contract, will be four stories, 125x172 feet, of mill construction; A. O. Eckerman, architect.

Oklahoma City, O. T.—Telephone Building. Gross Construction Co. has contract to erect five-story building for the Pioneer Telephone Co., previously reported; cost \$125,000.

Oklahoma City, O. T.—Amusement Park.—S. S. Baldwin of Wichita, Kan., manager of the Bijou Vaudeville Circuit, has leased Putnam Park, containing 20 acres of land, and will convert it into an amusement park, building summer theater, installing figure 8, roller coaster, electric fountain and other attractions. It is estimated that \$100,000 will be expended.

Oklahoma City, O. T.—Natorium.—Elmer E. Houghton, L. Towler, L. C. Ladd and others have organized company with \$10,000 capital stock for the erection of a natatorium; two stories, 75x140 feet.

Omaha, Texas.—School Building.—Sheppard Bros., Greenville, Texas, have contract at \$6820 for erection of proposed school building.

Pass Christian, Miss.—School Building.—Town Council will receive bids until June 5 for the erection of two-story brick school building. Plans and specifications on file at office of Geo. P. Brandt, clerk. Certified check for 2 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Pensacola, Fla.—Hotel.—C. H. Bliss, O. L.

Bass and C. V. Green have purchased site on which they contemplate erecting hotel.

Pensacola, Fla.—Office Building.—Charles H. Turner has contract to erect seven-story office building for W. A. Blount, previously mentioned; 83x105 feet; reinforced concrete; steam heat; gas and electric fixtures; electric elevator (Otis); cost \$170,000. Frederick Ausfeld prepared the plans.

Pensacola, Fla.—Pythian Hall.—Plans and specifications have been completed for proposed three-story building to be erected by the local Pythians. An electric elevator will be installed.

Poteau, I. T.—School Building.—Town has voted affirmatively proposed \$10,000 bond issue for erection of school. Address Town Clerk.

Reynolds, Ga.—Hotel.—William Petticord of Fort Valley, Ga., and associates, it is reported, will erect hotel at Minona Springs.

Roanoke, Va.—Warehouse.—G. G. Kirkwood has contract to erect warehouse for Adams, Payne & Gleeves after plans by H. H. Huggins; brick; 178x80 feet.

Rolla, Mo.—Building.—Bids for construction of an ore-dressing laboratory at the School of Mines will be opened May 25 by the executive committee at the Southern Hotel, St. Louis, Mo. Copies of plans and specifications may be seen at the School of Mines, Rolla; also at office of Howe, Holt & Cutler, architects, Kansas City, Mo., and at office of Buxton & Skinner Stationery & Printing Co., St. Louis, Mo.

San Antonio, Texas.—Theater.—Majestic Theater Co. contemplates the erection of \$100,000 theater building.

Savannah, Ga.—Bank Building.—The building mentioned last week to be erected by the Citizens' and Southern Bank will be one story, 60x120 feet, of marble, fireproof construction, steam heat, electric lights; cost \$200,000.

Scranton, Miss.—Hotel.—Plans by J. E. Herbert, 218 Reynold street, Biloxi, Miss., have been adopted for proposed \$40,000 hotel; three stories; brick and stone; 50 bedrooms, 25 of which will have bath attached; private telephone exchange; steam heat.

Sewell's Point, Va.—Building.—Parker & Thomas, Union Trust Building, Baltimore, Md., have been commissioned to prepare plans for building to be erected by the State of Maryland at the Jamestown Exposition; cost about \$25,000.

Sewell's Point, Va.—Building.—Jamestown Exposition Co., Norfolk, Va., will receive bids until May 25 for erection of history and historic art building on the exposition grounds. Drawings and specifications may be obtained on application to Associated Architects and Engineers, New Century Building, Norfolk, Va. A deposit of \$15 will be required from each applicant for plans and specifications. If drawings and specifications are returned within five days deposit will be returned. If kept over five days \$10 will be deducted for each set so kept. Certified check for \$2000, payable to the Jamestown Exposition Co., must accompany each bid. Usual rights reserved.

Shelbyville, Ky.—Hospital.—C. I. Tinsley has contract to erect hospital for the King's Daughters after plans by L. Gruber; brick; contain 12 rooms; furnace heat; electric fixtures; cost \$5000.*

Sherman, Texas.—Church.—Travis Street Methodist Church is considering the erection of \$35,000 edifice; A. L. Beaty, chairman committee.

Snyder, Texas.—School Building.—E. B. Barnes, secretary school board, will receive bids until June 1 for the erection of school building.

Starke, Fla.—Bank Building.—Bank of Starke, recently organized, will erect building.

St. Augustine, Fla.—Dwelling.—Truman Lynn contemplates the erection of a \$6000 residence; steam heat and electric lights.

Staunton, Va.—College Buildings.—It is reported that additional buildings will be erected and other improvements made at the Mary Baldwin Seminary. W. W. King is chairman of building committee.

St. Denis, Md.—Church.—Protestant Episcopal congregation is having plans prepared by Ellicott & Emmart, Union Trust Building, Baltimore, Md., for proposed \$6000 edifice.

St. Louis, Mo.—Dwelling.—David May has purchased site 100x195 feet on which to erect a \$50,000 residence.

St. Louis, Mo.—Police Building.—Police Commissioners have approved plans for the erection of proposed three-story building to be used as headquarters for the police department.

St. Petersburg, Fla.—Store Building.—W. C. Henry has contract to erect store building for St. Petersburg Hardware Co., for which Bonniwell & Son was mentioned last week

as preparing plans; three stories, 80x100 feet; electric lights; hand-power elevators; cost \$23,000.*

Sulphur, I. T.—Business Building.—A. Abbot is having plans prepared for a business building.

Sulphur, I. T.—Auditorium.—Vendhouse Amusement Co. has been organized with G. M. Weems, president; C. P. Link, vice-president; Frank Field, secretary, and N. A. Howerton, treasurer, to erect auditorium.

Terrell, Texas.—Bank Building.—Walker & Wren of Forney, Texas, have contract to erect building for the First National Bank, previously reported; C. A. Gill & Son, Dallas, Texas, architects.

Texas City, Texas.—Dry-dock.—It is reported that a dry-dock 75 feet wide by 600 feet long will be built by a corporation headed by Robert Clark of the Bowers Southern Dredging Co. of Galveston, Texas.

Utica, Miss.—School Building.—Town will issue \$5000 of bonds for the erection of school building. Address Town Clerk.

Warren, Ark.—Depot.—T. E. Bratton, it is reported, has contract to build proposed passenger and freight depot for the Warren & Ouachita Valley Railway.

Washington, D. C.—Church.—The Douglas Methodist Episcopal Church, 11th and H streets N. E., has awarded contract to J. C. Yost, 715 9th street N. E., for extensive alterations and construction of gallery in church building, to cost about \$16,000; Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Dwellings.—Charles Boyd has awarded contract to J. R. Halslip, 1406 12th street N. E., for the construction of six two-story brick dwellings with hot-air-heating systems at 1205-1215 F street N. E., to cost about \$18,000; Edward O. Volland, architect, 418 L street N. W.

Washington, D. C.—Store Building.—Oscar G. Vogt, architect, Corcoran Building, 15th and F streets N. W., is preparing plans and specifications for store building to be erected at 915 and 917 Pennsylvania avenue N. W.; three stories, 25x75 feet; enameled brick with ornamental terra-cotta trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; cost about \$15,000.

Washington, D. C.—Dwellings.—Littleton W. Walker, 418 Colorado Building, 14th and G streets N. W., has purchased lots on Columbia road between Champlain and Ontario streets, and will erect 20 three-story brick and stone dwellings on the site, to cost about \$10,000 each.

Washington, D. C.—Dwellings.—W. B. Jackson & Bro., 607 13th street N. W., has awarded contract to Peter Fersinger, 1 N street N. W., for the construction of three two-story brick dwellings at 226-230 C street S. W., to cost about \$10,000; Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Dwelling.—Mrs. Lena L. Graham, 812 I street N. E., has awarded contract to John Simpson & Sons, Forest Glen, Md., for the construction of 2½-story frame dwelling at 3215 Newark street, Cleveland Park, to cost about \$6000. Electric wiring and fixtures and hot-water-heating system will be installed.

Washington, D. C.—Dwelling.—John C. Davidson, 1413 G street N. W., has awarded contract to John H. Nolan, 1413 G street N. W., for the construction of dwelling at 1902 T street N. W.; three stories, 40x53 feet; brick with stone trimmings; slate and tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$15,000; Wood, Donn & Deming, architects, 808 17th street N. W.

Washington, D. C.—Office Building.—Referring to office building to be erected at 1304 and 1306 G street N. W. by Jordan & Bloomer, 1314 G street, the following contractors are estimating on construction: W. L. Turner, 41 Q street N. W.; George Loeffler, 803 Florida avenue N. W.; Burgess & Parsons, 627 F street N. W.; Blundon & Simon, 1006 F street N. W.; Allard & Appleby, 621 13th street N. W.; and James A. Dowrick, 62 Florida avenue N. W.; three stories, 28x32 feet; brick with stone trimmings; tin roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$15,000; bids to be in May 26; Hunter & Bell, architects, 1010 F street N. W.

Washington, D. C.—Apartment-house.—Geo. S. Cooper, architect, 1413 G street N. W., has awarded contract to Jones & Peter, 1413 G street N. W., for the construction of apartment-house at 1740 18th street N. W.; three stories, 40x115 feet; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$35,000.

Washington, D. C.—Dwellings.—Thomas H. Pickford, 1410 G street N. W., and Arms & Drury, 1311 G street N. W., have awarded contract to Jennings & Scott, Corcoran Build-

ings, 15th and F streets N. W., for the construction of six two-story concrete-block dwellings at 5412-5422 9th street N. W., to cost about \$12,000.

Washington, D. C.—Apartment-house.—Alonzo O. Bliss, Bliss Building, 35-39 B street N. W., has commissioned A. Goener, architect, Bliss Building, to prepare plans and specifications for apartment-house to be erected at southwest corner 1st and B streets N. W.; four or five stories; brick with stone trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system.

Washington, D. C.—Dwelling.—Mrs. M. L. Thompson has awarded contract to Charles A. Lohr, builder, Station 43, Goodhope, D. C., for the construction of two-story and basement dwelling at Congress Heights; C. E. Webb, architect, Warder Building, 523 9th street N. W.

Washington, D. C.—Dwelling.—J. R. Coryell, 1237 4th street S. E., will erect two-story and basement dwelling at Randle Heights, D. C.; C. E. Webb, architect, Warder Building, 523 9th street N. W.

Washington, D. C.—Dwelling.—Bristow Adams, 510 12th street N. W., is taking bids on erection of 2½-story frame and pebble-dash dwelling to be erected at Woodridge, D. C. Hot-air-heating system will be installed; Speiden & Speiden, architects, 705 G street N. W.

Washington, D. C.—Dwellings.—Referring to two dwellings to be erected on A street between 1st and 2d streets N. E. by George E. Fleming, 1414 F street N. W., and Albert L. Baldwin, 9 4th street S. E., the following contractors are estimating on construction: Thomas H. Melton, 19 T street N. W.; Burgess & Parsons, 627 F street N. W.; Peter Fersinger, 1 N street N. W.; three stories, 20x80 feet; brick with stone trimmings; galvanized-iron cornice; tin roofing; electric wiring and fixtures; sanitary plumbing; hot-water-heating systems; bids to be in May 17; Appleton P. Clark, Jr., architect, 605 F street N. W. This contract was reported last week as having been awarded to Osterman & Butler, but was later rescinded.

Washington, D. C.—Dwelling.—Referring to dwelling to be erected at Cleveland Park by K. Gwynn Gardner, Fendall Building, 344 D street N. W., the following contractors are estimating on revised plans: United Supply Co., Benjamin Poston, Chesapeake road near Wisconsin avenue; John Simpson & Sons, Forest Glen, Md.; A. C. Warthen, Kensington, Md.; brick with pebble-dash trimming; electric wiring and fixtures; sanitary plumbing; heating system; Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Dwellings.—The Washington Sanitary Improvement Co., 235 P street N. W., has awarded contract to Thos. H. Melton, 19 T street N. W., for the construction of six apartment-houses at P and Bates streets N. W.; two stories; brick with stone trimmings; tin roofing; sanitary plumbing; Appleton P. Clark, Jr., architect, 605 F street N. W.

Weatherford, Texas.—Widows and Orphans' Home.—Plans by C. H. Page, Jr., Austin, Texas, have been adopted for proposed Knights of Pythias Widows and Orphans' Home.

West Point, Miss.—School.—P. J. Krouse, Mizza & Woods Building, Meridian, Miss., is preparing plans for a two-story brick school building with stone trimmings, tile roof, to be erected at a cost of \$30,000. Slate blackboards, plumbing, wiring and steam heat will be installed. Contract for the construction will be let in about two weeks. J. N. Powell is superintendent.

Wheeling, W. Va.—School Buildings.—Board of Education is reported as arranging for a \$75,000 bond issue for school purposes. Jas. A. Bryan is president.

Winston-Salem, N. C.—Store Building.—A. H. Eller of Winston-Salem and H. G. Chatham of Elkin, N. C., are having plans prepared by Architect Zimmerman for erection of two-story brick store building.

Cagney Bros.' Miniature Railroads.

The attention of park managers and others who are interested in modern amusement devices for pleasure parks is called to the fact that special inducements are now being offered as to prices on miniature railroads built by the Cagney Bros. Miniature Railroad Co. of 74 Broadway, New York. The popularity of these miniature railroads is evidenced from the fact that the company named has received more orders for them this year than in any previous year since the introduction of these equipments. These miniature railroads include the modern American locomotive reduced to a net weight of 1200 pounds, drawing open cars in which the passengers are seated. Full track equipment and cars are furnished. Prompt inquiries are invited.

RAILROAD CONSTRUCTION.

Railways.

Addison, W. Va.—Reported that the West Virginia Midland Railway, recently chartered by John T. McGraw of Grafton, J. W. Wooddell of Webster Springs, W. Va., and others, will begin construction within two months. A mortgage for \$1,000,000 to cover cost of work has been filed. The West Virginia Midland will extend the Holly River & Addison Railroad, which is now 30 miles long, from Holly Junction, on the Baltimore & Ohio, to Webster Springs.

Atlanta, Ga.—The Atlanta, Birmingham & Atlantic Railway Co. has, it is reported, laid track on the extension from Montezuma to Talbotton, Ga., 44 miles. Construction is under way from the latter point to Talladega, Ala., 150 miles. It is expected to begin grading soon between Talladega and Birmingham. The contractors at work include C. D. Smith & Co. of Memphis, Tenn.; the Callahan Construction Co. of Knoxville, Tenn., and Wright, Williams & Wadley of Roanoke, Ala.

Augusta, Ga.—The Augusta Connecting Railroad Co. has been granted a charter for its proposed line, six miles long. Jacob Phinley of Augusta, John Skelton Williams of Richmond, J. W. Middendorf of Baltimore and others are interested.

Bainbridge, Ga.—Application will soon be made to charter the Georgia Southwestern & Gulf Railroad Co. to build a line about 150 miles long from Albany to the Gulf of Mexico at St. Andrews and St. Johns bays. The incorporators are W. M. Legg, recently general manager of the Georgia, Florida & Alabama Railroad; H. J. Bruton, Col. A. H. Russell, M. D. Powell of Bainbridge, Ga.; M. A. McRae of Baker, W. W. Gordon, Jr., of Savannah, W. H. Hilton of Marianna, L. V. Babcock of Pittsburgh, Pa.; D. S. Pate and G. J. Pope of Chicago.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. informs the Manufacturers' Record that there is nothing in the report that the Confluence & Oakland Railroad will soon be completed to Oakland, Md. It will probably be a long time before it is finished.

Baltimore, Md.—The Fidelity Construction Co., George E. Fisher, president, is pushing work on the construction of the Washington, Baltimore & Annapolis Electric Railway at several points between Baltimore and Washington, but principally at Odenton, Md.

Baton Rouge, La.—C. G. Vaughn, chief engineer in charge of construction, is reported as saying that grading contract on the Port Allen division of the Lafayette & Baton Rouge branch (Southern Pacific system) has been let to Marlow & Hodge.

Bellington, W. Va.—Reported that survey is being made for the West Virginia Connecting Railroad from Bellington via Tygart Junction along Elk river to Clarksburg, and thence to Brown and Mannington, W. Va., and Waynesburg, Pa.

Bennettsville, S. C.—The Marlboro & Deepwater Railroad Co. has applied for charter to build from Bennettsville toward Deepwater, 12 miles; capital \$25,000 to \$100,000. The incorporators are J. J. Mattheson, G. D. Mattheson and C. R. May.

Bramwell, W. Va.—The Interstate Railway Co. has been chartered to build a line from the State boundary between Pocahontas, Va., and Bramwell to Hinton, W. Va., and thence to Bluefield. The incorporators are Edward Cooper, Jairus Collins, Frank M. Archer, C. W. Freeman and Thomas Levering.

Bunkle, La.—M. Tansey and J. H. Parks have, it is reported, a contract to grade 16 miles from Ville Platte to Eunice, La., on the Bunkle East & West Railroad.

Cairo, Ga.—A business men's league has been organized and is considering plans to build a railroad from Albany via Cairo to St. Joseph's Bay, Fla., about 150 miles. The officers of the league are Thomas Wright, president; W. B. Roddenberry, vice-president; Col. R. C. Bell, secretary; W. H. Searcy, treasurer.

Cannel City, Ky.—J. W. Jones, chief engineer of the proposed Ohio & Licking River Railway, is quoted as saying that the line will be 72 miles long from Johnson, Ky., to Cannel City via Hillsboro, Farmer and Yale. Survey has been made for 60 miles from Hillsboro to Cannel City. W. B. Johnson of Wheeling, W. Va., is president. Mr. Jones' address is Gallipolis, Ohio.

Colquitt, Ga.—The Georgia, Florida & Alabama Railway has amended its charter to build an extension from either Colquitt or Babcock to Albany, Ga., about 45 miles. John Pasco is chief engineer at Bainbridge, Ga.

Columbia, S. C.—The Catawba Valley Railway Co., which proposes to build a line from Lugoff, on the Seaboard Air Line, to Harmony, S. C., about 91 miles, has applied for

a charter. The incorporators are J. L. Glenn, E. Berkeley and J. A. Fride. The plan is said to be in the interest of the Seaboard Air Line, of which W. L. Seddon is chief engineer at Portsmouth, Va. The plan will include the railway between Catawba Junction and Catawba Falls, 20 miles, on which 10 miles are built.

Cleburne, Texas.—Reported that B. F. Bond of Jacksonville, Ill., will shortly begin work on the proposed street railway in Cleburne.

Cuthbert, Ga.—The Central of Georgia Railway, it is reported, will build additional yard tracks at Cuthbert. H. M. Steele is chief engineer at Savannah, Ga.

Dallas, Texas.—An official of the Missouri, Kansas & Texas Railway informs the Manufacturers' Record that the yards at Hillsboro and Greenville, Texas, and the south yards at Houston, Texas, will be extended, the work to be done by the company's forces.

Dalton, Ga.—Reported that a stock company has been formed and plans perfected to complete the Dalton & Alaculay Railroad via Spring Place, Ga.

Denison, Texas.—The Gibson Construction Co. has, it is reported, been given a contract to revise the main line of the Missouri, Kansas & Texas Railway. Charles McSweeney has a subcontract. Another report says that Patton & Gibson of Pittsburgh have the contract, which covers 45 miles from Atoka, I. T., to the Red river.

De Ridder, La.—The Jasper & Eastern Railroad will, it is reported, build two branches to connect with saw-mills near De Ridder—one to Ludington, two miles, and the other to Bon Ami, three miles. The latter line is to be continued to Carson, three miles further. C. F. W. Felt, chief engineer of the Santa Fe at Galveston, Texas, has charge of construction.

Diboll, Texas.—The Texas Southeastern Railroad has, it is reported, filed an amendment to its charter for a main line from Diboll northwest across the Neches river and thence southward to Everett, Texas; also for a branch from a point about seven miles from Diboll to Lufkin and for another branch from a point about 17 miles from Diboll to Weches, Texas. The company now operates 50 miles, and the proposed addition will give it not more than 100 miles of track. W. J. Raef is general manager at Diboll.

Elkins, W. Va.—The Coal & Coke Railway Co. has begun construction of a branch from Middle Fork to Cassity Fork, 12 miles, to open up timber and coal lands. Two or three miles of track have been laid.

Eminence, Ky.—The Shelbyville & Ohio Electric Railroad Co., which proposes to build a line from Shelbyville, Ky., via Eminence, Newcastle, Campbellsburg, Prestonville and Carrollton to Milton, Ky., will, it is reported, begin construction soon. Officers have been elected as follows: President, George W. Young of Eminence, Ky.; vice-president, Dr. W. L. Nuttal of Newcastle, Ky.; secretary, H. L. Fremd of Eminence, Ky., and Luther H. Leber of New York, general manager.

Enid, O. T.—W. O. Cromwell, attorney-general of Oklahoma, has been elected president of the Enid Street Railway Co., and he is reported as saying that construction will begin within three months.

Fernwood, Miss.—The Fernwood & Gulf Railway Co., which controls a line from Fernwood to Tylertown, Miss., 25 miles, and which proposes to extend to Gulfport, announces its organization. It is said to be associated with the New Orleans Great Northern. The organizers are I. C. Enoch, G. C. Ligon, Phil H. Enoch, S. H. McLaughlin and F. B. Enoch.

Finchburg, Ala.—The Flat Creek Mill Co. of Finchburg proposes to build a railroad from Finchburg to Mobile, Ala., where dock facilities will be erected. The incorporators are W. H. Louiselle, J. T. McKean, Cyrel Louiselle and Sibley Homes.

Frederick, Md.—The Baltimore, Frederick & Hagerstown Electric Railway Co. has given a contract to Westinghouse, Church, Kerr & Co. of New York to build its line from Frederick to Hagerstown, Md., 26 miles, work to be started soon. The entire line will be 78 miles long, the distance from Baltimore to Frederick being 52 miles. About seven miles of sidings will also be built. James E. Ingram, Jr., of Baltimore is president, and J. Roger McSherry of Frederick is vice-president.

Gulfport, Miss.—The Gulfport & Mississippi Coast Traction Co. has completed and is operating line between Biloxi and Beauvoir, two miles from Biloxi, and also from Athletic Park in Gulfport eastward to the eastern end of Soria City. A large force is at work to complete the six-mile gap between these sections so as to have the line in operation early in June. The company proposes to

have 25 miles of line altogether along the Mississippi coast. Joseph T. Jones of Gulfport is president.

Guthrie, O. T.—The Manufacturers' Record is officially informed that the Santa Fe, Liberal & Englewood Railroad Co. is probably not designed to build any line for the Santa Fe system, and neither has the latter any plan to build from Englewood, Kan., to Raton, N. M.

Hamburg, Ark.—Reported that the Mississippi River, Hamburg & Western Railway will be extended 10 miles from Crossett, Ark., to White Station, on the Bastrop & Eldorado Railroad. E. F. Mitchell, engineer of construction, Missouri Pacific Railway, St. Louis, Mo., may give information.

Hobart, O. T.—Jesse Kirks, president and general manager of the proposed Washita & Comanche Railroad, is seeking to construct it via Hobart. The line is to run from Denver into Texas.

Homer, La.—Reported that about 20 miles of line are graded for the Shreveport & Northeastern Railroad, now under construction from Homer via Minden to Shreveport, La. Rails have been ordered from the Carnegie Steel Co. A. K. Clingman and others are interested.

Houston, Texas.—Concerning a report that Mr. Elijah Smith was preparing to rehabilitate the Western Narrow Gauge Railway from Houston to Sealy, Texas, Mr. Smith informs the Manufacturers' Record that it is not certain how he will utilize the property. His address is P. O. Box 3107, Boston, Mass.

Houston, Texas.—An official of the Houston & Texas Central Railway writes the Manufacturers' Record that there is nothing in the report that an extension will be built from Denison, Texas, to Topeka, Kan.

Huttonsville, W. Va.—Brown & Co. of Pittsburgh, Pa., are reported to be pushing construction on a standard-gauge railroad from Lantz to Huttonsville, 35 miles. It will develop timber lands in Upshur and Randolph counties.

Jackson, Miss.—Fred Herrick of Milwaukee, Wis., who, with others, purchased the Foley and Larsen timber lands on Pearl river north of Jackson, will, it is reported, build a railroad to develop the properties, provided that an extension is not built by either the Illinois Central or the New Orleans Great Northern.

Jacksonville, Fla.—The Jacksonville, Fernandina & Western Railway Co., which proposes to build a line 40 miles long from Jacksonville via Fernandina to the Georgia boundary, has organized by electing officers as follows: President, W. M. Toomer of Jacksonville; vice-president, C. W. Deen of Baxley, Ga.; secretary, J. C. Reynolds of Jacksonville; treasurer, Arthur T. Williams; directors, Jackson Mizell, King's Ferry; Fred W. Hoyt, Fernandina; W. M. Toomer, Jacksonville; C. W. Deen, Baxley; George W. Deen, Waycross; George L. Drew, Arthur T. Williams, Jacksonville; John McLean, Douglas, and A. Sessoms, Waycross.

Kansas City, Mo.—The Kansas City, St. Joseph & Excelsior Springs Railroad Co. proposes to build a line from Kansas City to St. Joseph, Mo., 52 miles, via Excelsior Springs.

Lafayette, La.—Thornwell Fay, vice-president of the Southern Pacific lines, is quoted as saying that contracts have been let for most of the grading between Baton Rouge and Lafayette, 52 miles; also that a contract has been let for the Port Barre extension.

Lehigh, I. T.—Dorset Carter, president of the Oklahoma Central Railway, is reported as saying that it has decided to build 100 miles of line south and east from Lehigh, I. T., perhaps to Paris, Texas.

Lexington, O. T.—The Colonial Construction Co., which is building the Oklahoma City, Lexington & Sulphur Springs Electric Railway, will, it is reported, soon take steps to complete the line from Oklahoma City to Sulphur, I. T. The officers are E. P. Spears, president; O. E. Upp, vice-president; J. S. Little, treasurer, and George A. Teague, secretary. The directors are E. P. Spears of Dallas, Texas; J. S. Little, Jay Sherman, O. E. Upp, E. J. Keller, Robert E. Thacker of Lexington and Guy V. McClure of Oklahoma City.

Louisville, Ky.—The Louisville & Eastern Electric Railway is reported sold by H. H. Bechtel of Cincinnati and associates to F. M. Fauvre, C. Edgar Elliott and Harry B. Gates of Indianapolis and Percival Moore of Louisville. The company, as heretofore reported, contemplates extensions. Mr. Moore is already vice-president, treasurer and manager of the company. A mortgage has been filed to secure \$2,000,000 of 5 per cent. bonds to cover the extensions and to take up \$450,000 of old bonds. The extensions are Beards to

Lagrange, Lakeland to Shelbyville, Shelbyville to Frankfort and Shelbyville to New-castle.

Lynchburg, Va.—W. J. Oliver & Co., contractors for the Southern Railway detour line around Lynchburg, have begun work starting on the approach to the tunnel at Rivermont.

MacDonald, W. Va.—Reported that survey has been made for the White Oak Railway from Mount Carbon to Oak Hill, W. Va., 20 miles. Samuel Dixon is president, and F. W. Scarborough, chief engineer, both at MacDonald.

Martinsburg, W. Va.—James F. Thompson and Stuart W. Walker, representing a syndicate, have been granted a franchise in Martinsburg for the proposed electric railway which is to be built to Charles Town, Shepherdstown and Harper's Ferry.

Memphis, Tenn.—The Memphis & Horn Lake Railroad Co. is reported to be organizing to build an interurban electric railway from Memphis to Horn Lake, Miss., about 15 miles. Memphis business men are back of the project.

Meridian, Miss.—Mr. C. F. Woods writes the Manufacturers' Record that the Meridian & Tombigbee Railroad Co. has applied for a charter and that a preliminary survey was made five or six months ago. A survey is now being made by F. D. Harvey, to be completed by June 1, when it is hoped to receive estimates for construction. The line will touch the Tombigbee river at Nahcola, Ala. The incorporators are C. F. Woods, Frank Heiss, A. D. McRaven, J. M. McBeath, A. Poltevant, Dr. J. R. Phillips and others.

Morehead, Ky.—F. W. Dodge, engineer, is reported as saying that the Rinehart & Dennis Company, Washington, D. C., has the contract for the Morehead & Northfork Railroad from Morehead to Paragon, Ky., 12 miles, and has begun construction. E. W. Hess is chief engineer. W. M. McCormick of Philadelphia is president.

Mt. Sterling, Ky.—The Paris & Mt. Sterling Railway Co. has filed articles of incorporation to build its proposed line via Sideview and North Middletown. The incorporators are John T. Collins and W. A. Thomason of North Middletown, D. C. Talbot, Henry A. Power, R. J. Neely of Paris, H. Clay McKee and J. M. Bigstaff of Mt. Sterling, Ky.

New Orleans, La.—An officer of Morgan's Louisiana & Texas Railroad and the Louisiana Western Railroad writes the Manufacturers' Record that a branch will very likely be built from Bayou Sale Station to South Bend, about 10 miles, and another branch from Cade or Lafayette to Hunter's Canal, about 20 miles. Surveys have not yet been made. A. V. Kellogg is engineer at Houston, Texas.

New Orleans, La.—The Belt Railroad commission is reported to be negotiating with the Texas & Pacific Railway to build a union passenger station. The railroad company proposes at any rate to erect a station for its passenger business. B. S. Wathen is chief engineer at Dallas, Texas.

New Orleans, La.—An official of the Illinois Central Railroad informs the Manufacturers' Record that it is proposed to construct some additional repair tracks in the yards at Harahan near New Orleans, but the work is not yet authorized. A. S. Baldwin is chief engineer at Chicago.

Newport News, Va.—The Newport News & Old Point Railway & Electric Co., W. J. Payne, president, proposes to build a double track in the town of Phoebus.

Oakdale, La.—Reported that the Gulf, Colorado & Santa Fe Railway of the Santa Fe system, which has lately let contract for the extension of the Jasper & Eastern Railway to Oakdale, La., will continue an extension from that place to Baton Rouge, La., with the object of ultimately reaching New Orleans. C. F. W. Felt is chief engineer at Galveston, Texas.

Opelousas, La.—Mr. L. E. Littell writes the Manufacturers' Record confirming the report of the organization of the Opelousas, New Orleans & Northwestern Railway Co., and saying that the line will be 40 miles long to connect Opelousas and Ville Platte with Oakdale and Alexandria, La. Ira W. Sylvester of Alexandria is engineer; survey not yet started. The directors are L. E. Littell, president; Yves Andrepoint, vice-president; J. G. Lawler, secretary; J. L. Dossman, R. Remi Mornhinve, M. L. Swords and J. F. Vidrine.

Orangeburg, S. C.—It is proposed to build a railway from North, S. C., to Orangeburg and thence to a point near Vance, S. C., on the Santee river, about 45 miles. The charter application is signed by William C. Wolfe of Orangeburg, E. C. Johnson of North and Edgar L. Culler and Thomas R. McCants. Mr. Wolfe informs the Manufac-

turers' Record that the line will be called the Orangeburg Railway, and that it is proposed to build an electric line in and around Orangeburg for about 25 miles. He also confirms the report about the line from North to the Santee river. Mr. Wolfe is in charge of the enterprise at present.

Paris, Ky. — The Louisville & Nashville Railroad Co., it is reported, contemplates extensive improvements to its new yards in Paris. W. H. Courtenay is chief engineer at Louisville.

Pelham, Ga. — The Flint River & Northeastern Railroad has, it is reported, been transferred to its new owners and the following officers were elected: J. L. Hand, president; G. E. Smith, traffic manager; B. H. Grover, secretary. It is proposed to extend the line to Bainbridge, Ga.

Pensacola, Fla. — The Manufacturers' Record has information confirming the report that Stone & Webster, 84 State street, Boston, have purchased the Pensacola Electric Terminal Railway and also the Escambia County Electric Light & Power Co., likewise of Pensacola. Improvements are proposed. The new officers are: H. H. Hunt of Boston, president; J. W. Leadly of Boston, general manager; Robert Richardson, treasurer; directors, H. H. Hunt of Boston, A. C. Blount, Jr., of Pensacola, Robert Richardson, J. C. Dunham of Pensacola, Henry Palmer, John C. Rice and F. I. Biefer of Boston.

Perryville, Mo. — A company has been organized to build an electric railway from Perryville to Clearyville, on the Mississippi river. The officers are: Dr. D. F. Morton, president; S. C. Marks, secretary; A. E. Doerr, treasurer.

Pollard, Ala. — The Lindsay Lumber Co. of Pollard proposes to build a railroad from Pollard to Milton, Ala.

Princeton, W. Va. — Reported that the Blue-stone Land & Lumber Co. will build a railroad to develop its properties on Bluestone river and Camp creek. William Sharpe of Ridgeway, Pa., is secretary.

Quitman, Miss. — The Mississippi Eastern Railway Co. will, it is reported, immediately begin work on another 10-mile extension. J. W. Glynn is engineer.

San Antonio, Texas. — R. A. Reese is reported to be working on a plan to build an electric interurban railway from San Antonio to Fort Worth, Texas, about 260 miles.

Searcy, Ark. — H. R. Kilpatrick, general manager, is reported as saying that grading is under way from Doniphan to Kensett, Ark., one and one-half miles on the Doniphan, Kensett & Searcy Railroad, which is to be built from Doniphan to Searcy, six miles. C. J. Carter of Kansas City, Mo., is president.

Shryock, W. Va. — Reported that G. W. Huntley, Jr., of Shryock has a contract to grade an extension of the Greenbrier & Iron Mountain Railway.

Vicksburg, Miss. — O. C. Catchings has applied for a street-railway franchise for Harry K. Johnson, Frank D. Markham, T. A. Helgason and E. B. Helgason.

Walhalla, S. C. — President Samuel Spencer, Fairfax Harrison, assistant to the president; W. H. Wells, engineer of construction, and other officers of the Southern Railway are reported to be inspecting the proposed route for an extension of the Blue Ridge Railway from Walhalla to Clayton, Ga., and Franklin and Bushnell, N. C.; also the route of the new line between Bushnell and Maryville, Tenn. Mr. Wells' address is at Washington, D. C.

Welsh, Ia. — The Rice Belt & Northwestern Railroad Co. will, it is said, be chartered to build a line connecting Lake Arthur, Welsh and Kinder; capital \$2,000,000. The officers are: L. E. Robinson, president; Dr. R. R. Arceneaux, vice-president; O. Fulton, treasurer; Dr. J. P. Cooper, secretary; directors, E. M. Clark, L. E. Robinson, P. J. Unkel, Dr. J. P. Cooper, mayor of Welsh; T. S. Langley, C. E. Carr, F. D. Calkins, O. Fulton and Dr. R. R. Arceneaux.

Winston-Salem, N. C. — O. H. P. Cornell, chief engineer of the Winston-Salem South Bound Railway, is reported as saying that the route will be from Winston-Salem via Lexington, New London, Albemarle, Norwood and Ansonville to Wadesboro, N. C., 90 miles. Final surveys are in progress and construction has been started, as heretofore reported, by Pruden & Bennett of Greensboro, N. C., who have a contract covering two miles from Winston-Salem to Centerville.

Zachary, Miss. — An officer of the Yazoo & Mississippi Valley Railroad informs the Manufacturers' Record that there is nothing in the press report of a survey for a branch to Profits Island from Baker or Zachary, Miss.

Street Railways.

Baltimore, Md. — The United Railways & Electric Co. has applied for a franchise to build the Roland Park boulevard extension under the Maryland Electric Railway Co., recently chartered. J. M. Hood is president.

Gadsden, Ala. — The Alabama City, Gadsden & Attalla Railway Co. has applied for a franchise to make extensions. The company is already at work on other extensions.

Paducah, Ky. — The city will sell on May 30 a street-railway franchise in accordance with a recent ordinance. O. B. Starks is acting mayor.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Automatic-filling Machines. — John Bradford, 16 Grove street, Montgomery, Ala., wants automatic-filling machines for filling packages of all kinds.

Automobile Parts. — Southern Automobile Manufacturing Co., John B. McDonald, president, Jacksonville, Fla., wants malleable-steel castings for hub cones and other light parts; also drop forgings and pressed-steel parts.

Automobiles. — William Curry's Sons, 611 Front street, Key West, Fla., wants one or more motor delivery wagons, either steam or gasoline.

Conveying Machinery. — D. J. Haire, Gulfport, Miss., wants to correspond with dealers in grain-elevator conveying machinery.

Boiler. — See "Engine and Boiler."

Boiler. — See "Engine and Boiler."

Boiler. — See "Engine and Boiler."

Boilers. — San Antonio Canning Co., San Antonio, Texas, wants boilers.

Boilers. — See "Engines and Boilers."

Boilers. — See "Engines and Boilers."

Brick Machinery. — Washington Investment Co., W. E. Jones, manager, Washington, N. C., wants machinery and equipment for sand-lime brick plant.

Brick Machinery. — J. R. Butler, care of Arlington Hotel, Cape Charles, Va., wants information regarding machinery for the manufacture of various kinds of brick.

Bridge Construction. — W. F. Sanders, supervisor Beaufort county, Beaufort, S. C., will receive bids until May 21 for construction of reinforced-concrete bridge. Plans and specifications can be seen at supervisor's office or at office of W. F. Brown, supervising engineer, Courthouse, Savannah, Ga. Certified check for 5 per cent. of amount of bid must accompany each proposal. Beaufort county commissioners reserve usual rights.

Bridge Construction. — Judge W. T. Morris will receive bids until May 22 for building an iron bridge over the Big Sandy river in Brenton and Henry counties; W. D. Cooper, county clerk.

Building Materials. — I. H. Sykes, Columbus, Miss., invites bids for construction materials for cotton-cordage mill.

Building Materials. — R. S. Meade, Lebanon, Va., wants prices on maple flooring, window and door frames, stairway, inside and outside wood-finishing material, such as casings, bases, cornices, etc.; metal roofing, porch columns, including composite caps and brackets.

Building Materials. — Jacksonville Cracker Works, Room 9, 22 Hogan street, Jacksonville, Fla., wants building materials.

Building Materials. — St. Petersburg Hardware Co., St. Petersburg, Fla., wants prices on ironwork, glass, etc., for store building.

Bungs. — Josef Schvarcz & Co., Vaci-korut 26, Budapest, Hungary, want addresses of manufacturers of compressed-air bungs.

Can Machinery. — San Antonio Canning Co., San Antonio, Texas, wants can-making machines.

Canal Construction. — Commissioners of Chuquatonchee Drainage System, Chickasaw county, Okolona, Miss., will receive bids un-

til June 2 for cutting a canal about 15 miles long; ditch to be 16 feet wide at top, 13 feet wide at bottom, 5 feet deep for one-half the distance from Clay county line, and for the other half the distance 13 feet wide at top, 10 feet wide at bottom and 5 feet deep. Engineer estimates 190,666 cubic yards of dirt to be excavated. For information write Wiley A. Marlon, clerk, Van Vleet, Miss.

Cannery Equipment. — San Antonio Canning Co., San Antonio, Texas, wants equipment for cannery.

Candy Machinery. — Littlefield & Steere Company, Knoxville, Tenn., wants candy machinery.

Conveying Machinery. — Venable Bros., Temple Court, Atlanta, Ga., wants machinery for conveying granite from quarry to crushers.

Cotton-cordage Machinery. — I. H. Sykes, Columbus, Miss., invites bids for cotton-cordage machinery.

Crusher. — Woodstock Lime Co., Dr. A. G. Coumbe, president, Vienna, Va., wants rock crusher.

Crushing Machinery. — The Franklin mines, Snow Creek, Va., wants machinery for crushing and grinding mica scrap.

Drill. — Woodstock Lime Co., Dr. A. G. Coumbe, president, Vienna, Va., wants steam drill.

Electric Fans. — John H. Nutt, manager Sumrall Telephone & Telegraph Co., Sumrall, Miss., wants dry-battery fans and one electric fan.

Electric Fixtures. — Bids will be received until June 11 at the office of constructing quartermaster, U. S. A., Fort Hunt, Virginia, for furnishing and installing electric-light fixtures and wattmeters in the post exchange and gymnasium building and constructing a feeder line and making service connections at Fort Washington, Maryland. Information furnished on application. Bidders will state in their proposals the names of manufacturers of the fixtures, meters and cable they propose to use. Proposals must be marked "Proposals for Electric Light Fixtures for Post Exchange and Gymnasium Building at Fort Washington, Maryland," and addressed to the constructing quartermaster, U. S. A., Fort Hunt, Virginia.

Electrical Equipment. — Town of Goodwater, Ala., wants dynamos and arc lights. Address J. S. Gilliland.

Electrical Equipment. — Jacksonville Cracker Works, Room 9, 22 Hogan street, Jacksonville, Fla., wants electrical equipment.

Electrical Equipment. — J. S. Cook, Christiansia, Norway, wants dynamos for launches.

Electric-light Plant. — Harmony Grove Cotton Mills, Commerce, Ga., will take figures on May 18 for machinery and material for an electric-light plant for the city. Plans and specifications can be had by addressing Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga.

Electric-light Plant. — Ricks Bros., Reynolds, Ga., wants prices on a small dynamo suitable for a 15-horse-power Otto gasoline engine to be used in lighting town; also six to eight arc street lamps, as many small lights for stores and residences as this size engine will furnish, lamps, transformers, wiring, etc.; location, 6500 feet from where lights are to be furnished.

Elevator. — St. Petersburg Hardware Co., St. Petersburg, Fla., wants prices on hand elevator.

Engine and Boiler. — D. F. Cox, Aycock, Fla., wants engine and boiler for farm purposes.

Engine and Boiler. — Littlefield & Steere Company, Knoxville, Tenn., wants engine and boiler.

Engine and Boiler. — D. M. Baker, Room 14, Wedeman Building, Jacksonville, Fla., wants engine and boiler complete, mounted.

Engines and Boilers. — Jacksonville Cracker Works, Room 9, 22 Hogan street, Jacksonville, Fla., wants engines and boilers.

Engines and Boilers. — Broadway Hardware Manufacturing Co., Anthony Rhodes, manager, Broadway, Va., wants engines and boilers.

Excavating Machine. — D. M. Baker, Room 14, Wedeman Building, Jacksonville, Fla., wants trench machine (Carson preferred).

Fire-department Equipment. — Sealed proposals, addressed to the Board of Awards, Baltimore, Md., will be received until May 23 at office of Harry F. Hooper, city register, City Hall, for furnishing fire department with one first-size Hayes aerial hook and ladder truck. Specifications may be obtained from P. W. Wilkinson, secretary, fire department, City Hall.

Fire-department Equipment. — Sealed proposals, addressed to the Board of Awards, Baltimore, Md., will be received until May 23 at office of Harry F. Hooper, city register,

City Hall, for furnishing fire department with one Dahill hoisting device complete with motor and compressor. Specifications may be obtained from P. W. Wilkinson, secretary, City Hall.

Furnaces. — Mrs. L. C. Willis, Shelbyville, Ky., wants information regarding furnace heat for hospital.

Ginnery Equipment. — Dickson Bros., Com-

fort, Fla., will want machinery for cotton gin.

Grinding Mills. — International Mineral Remedy Co., W. W. Rucker, secretary, Guthrie, O. T., wants mills for grinding minerals for medicinal preparations.

Heating Apparatus. — Mrs. L. C. Willis, Shelbyville, Va., wants information regarding furnace heat for hospital.

Heating Apparatus. — James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive bids until May 29 for the low-pressure steam-heating apparatus for the United States customhouse, Charleston, S. C., in accordance with drawings and specifications, copies of which may be had at office of supervising architect or at the office of the custodian, Charleston, S. C., at the discretion of the supervising architect.

Heating Apparatus. — R. S. Meade, Lebanon, Va., wants prices on hot-water-heating plant for 12-room residence.

Heating Apparatus. — Jett Bros. Contracting Co., Mobile, Ala., wants bids on heating apparatus for three-story building.

Hoist Electrical Equipments, etc. — Bids will be received until May 29 at the bureau of supplies and accounts, Navy Department, Washington, D. C., for furnishing at the works of the New York Shipbuilding Co., Camden, N. J., and the Newport News (Va.) Shipbuilding & Dry-Dock Co., as specified, a quantity of rammer, elevating and ammunition hoist electrical equipments. Applications for proposals should refer to Schedule 544. Blank proposals and copies of specifications will be furnished on application; H. T. B. Harris, paymaster-general, U. S. N.

Hoisting Engine. — W. C. Porter, Laurel, Miss., wants one 7½x10-inch single-drum double-cylinder hoisting engine on metal frame.

Hoisting Engine. — A. V. Cross, Guilford College, N. C., wants hoisting engine, gasoline or steam.

Hoisting Engine. — Woodstock Lime Co., Dr. A. G. Coumbe, president, Vienna, Va., wants hoisting engine.

Hospital Equipment. — Mrs. L. C. Willis, Shelbyville, Ky., wants equipment for operating room.

Hydraulic Press. — Smith-Hale Company, 42 Virginia-Carolina Building, Norfolk, Va., wants hydraulic press, 200 tons pressure, 66 or 72 inches between bars.

Hydraulic Tobacco Presses. — Tennessee-Kentucky Tobacco Co., W. H. Crawford, president, First National Bank Building, Nashville, Tenn., wants hydraulic tobacco presses for tobacco factory at Clarksville, Tenn.

Knitting Machinery. — I. H. Sykes, Columbus, Miss., wants estimates on 25 300-needle machines and 25 84-needle machines.

Levee Work. — Bids will be received until May 24 by J. T. McClelland, president board of commissioners, fifth Louisiana levee district, Tallulah, La., at office of State engineers, Room 402 Cotton Exchange Building, New Orleans, for following levee work: Willow Point Loop—Parish of East Carroll, riverside enlargement, approximate contents 300,000 cubic yards, deposit required \$800, bond required \$15,000; Sycamore—Parish of Concordia, new levee, approximate contents 300,000 cubic yards, deposit required \$800, bond required \$15,000. Terms of payment cash. Full information as to location, character of work and blank forms for proposals may be obtained at office of State engineers or at the office of the fifth Louisiana levee district. Usual rights reserved.

Locomotive Crane. — Baltimore Engine Co., 327 North Calvert street, Baltimore, Md., wants a five-ton locomotive crane.

Machine Tools. — Southern Iron & Equipment Co., Atlanta, Ga., wants two-inch bolt machine; also turret lathe.

Machine Tools. — Smith-Hale Company, 42 Virginia-Carolina Building, Norfolk, Va., wants one punch, 36-inch throat.

Metal-working Machinery. — Smith-Hale Company, 42 Virginia-Carolina Building, Norfolk, Va., wants one medium-size bending roll suitable for rolling three-quarter-inch sheets and under, with quartered coupled engine.

Paper and Pulp Mill. — Roanoke Rapids (N. C.) Paper Manufacturing Co. wants bids on equipment for a 20-ton paper and pulp mill. Address A. H. Christian, Jr., president, Richmond, Va.

Paving.—Street and Alley Committee, Cumberland, Md., will open bids May 22 for grading and paving about 4800 feet of Maryland avenue (in three sections); all work to be done in accordance with plans and specifications on file in city engineer's office. Bids to be on blank forms furnished by engineer. Certified check for \$200 must accompany each bid. Usual rights reserved.

Paving.—Sealed proposals will be received by the Walbrook Land Corporation, 127-129 East Fayette street, Baltimore, Md., for macadamizing and guttering several streets in Walbrook. Specifications may be obtained on application to Max Brafman, manager.

Paving.—J. D. Fousler, clerk board of town commissioners, North Wilkesboro, N. C., wants estimates as to cost of various kinds of street-paving; \$20,000 available.

Piping.—Thomas R. Martin & Sons, Franklinton, Md., wants prices on 14-inch iron water pipe, 15-inch and 4-inch vitrified-clay pipe.

Piping and Fittings.—R. A. Zoeller, Tabor, N. C., wants 600 feet of six-inch C. I. water pipe, a quantity of specials, hydrants, gate and chuck valves and pig lead; new or second-hand in good condition.

Plumbing.—Jett Bros. Contracting Co., Mobile, Ala., wants bids on plumbing for three-story building.

Power Machinery.—International Mineral Remedy Co., W. W. Rucker, secretary, Guthrie, O. T., wants power machinery.

Pump.—Shull Contracting Co., Beaufort, N. C., wants a six-inch centrifugal pump and sufficient steam power to operate same; machine to be used in shifting sand, mud and shells through pipe for 100 yards.

Pump.—D. M. Baker, Room 14, Wedeman Building, Jacksonville, Fla., wants four-inch centrifugal pump.

Pump.—W. C. Porter, Laurel, Miss., wants one second-hand duplex pump 10x7x10 inches.

Railway Equipment.—Mobile Yacht Club, L. C. Dorgan, secretary, Mobile, Ala., will probably want small car to haul passengers about 2000 feet; electric or gasoline motor.

Railway Equipment.—T. J. Cooper, Sandersville, Ga., wants about five miles of 35-pound steel rail; second-hand preferred.

Railway Equipment.—"Contractor," 256 Randolph Building, Memphis, Tenn., wants 24 or more 1½-yard 24-inch-gauge side-dump cars (Western make preferred).

Railway Equipment.—J. G. Humphrey, Wilmington, N. C., wants a 12 or 15-ton 36-gauge locomotive for logging purposes. Must stand rigid inspection. Oscillating type will not be considered.

Refrigerating Machinery.—Littlefield & Steere Company, Knoxville, Tenn., wants refrigerating machine.

Road-building.—Worcester County Commissioners, Snow Hill, Md., will receive bids until May 22 for grading and macadamizing the public highway between Snow Hill and Salisbury, aggregating one mile. Proposals will also be received at the same time and place by the commissioners for improving the highway between Pocomoke City and Stockton; to include the grading and macadamizing of about two miles of road. All work to be done under State supervision according to plans and specifications on file at the office of county commissioners. Certified check for \$200, payable to county commissioners, must accompany bids for each section named. All proposals to be made out on regular forms furnished by the State Geological Survey Commission, to be obtained through the office of the county commissioners. Usual rights reserved.

Road Improvements.—Commissioners of Gaston county will receive bids until June 5 at the courthouse, Dallas, N. C., for grading of about 20 miles of macadam road. Specifications can be seen at office of A. J. Smith, clerk of board, Dallas, N. C., after May 26. Usual rights reserved.

Road Roller.—Baltimore Engine Co., 327 North Calvert street, Baltimore, Md., wants a 10-ton steam road roller.

Roadworking Machinery.—H. P. Baker, Columbia, Va., wants cuts and prices on roadworking machinery.

Roofing.—See "Building Materials."

Rosin.—Percival Wood Preserving Co., W. G. Burchfield, secretary, Houston, Texas, wants pine rosin.

Saw-mill.—D. F. Cox, Aycock, Fla., wants a small portable saw-mill.

Shuttle and Bobbin Machinery.—A. L. York, Jr., Rock Creek, N. C., wants shuttle and bobbin machinery.

Steam Hammer.—Smith-Hale Company, 42 Virginia-Carolina Building, Norfolk, Va., wants one 300 to 400-pound steam hammer.

Steam Shovel.—Childersburg Brick Co., Talladega, Ala., wants second-hand steam

shovel; about one-yard dipper; Southern delivery; Thew preferred.

Stencil Outfits, etc.—J. L. Roark estate, Greenville, Ky., wants a stencil or stamping outfit to supply temporary grave markers; boards six inches to eight inches wide to be used; semicircle and square tops and a handy arrangement for quick marking is desired.

Telephone Equipment.—Gainesboro Telephone Co., Sparta, Tenn., wants material for building telephone lines.

Toothpick Machinery.—O. C. Bostic, Shelby, N. C., wants addresses of manufacturers of toothpick machinery.

Water-wheel.—Town of Goodwater, Ala., wants a water-wheel. Address J. S. Gilliland.

Wire Crimper.—American Steel Fence Post & Manufacturing Co., 1214 Main street, Fort Worth, Texas, wants wire crimper.

Woodworking Machinery.—Sills & Kluttz, Concord, N. C., want second-hand drum sander for sash and door work.

Woodworking Machinery.—Yorke Furniture Co., Concord, N. C., wants second-hand four-side 10 or 12-inch molder in good working condition.

Woodworking Machinery.—Broadway Hardwood Manufacturing Co., Anthony Rhodes, manager, Broadway, Va., wants equipment for sash, door and blind factory.

Woodworking Machinery.—See "Toothpick Machinery."

INDUSTRIAL NEWS OF INTEREST

The Watson-Stillman Company.

It is announced that the Watson-Stillman Company of 46 Dey street, New York, has removed its offices to 26 Cortlandt street. This company is the well-known manufacturer of hydraulic jacks.

Birmingham Mineral Properties Offered.

Some 60,000 acres of coal and timber lands located 40 miles from Birmingham, Ala., are offered for sale as a whole or in part. For further details address G. W. Darden, Oneonta, Ala.

A Lumber Proposition.

A lumber proposition that should attract the attention of those who are interested in the development of Southern properties is offered by W. J. Willingham of Tifton, Ga. He offers to sell 13,000,000 feet of timber, new mill, tramroad and equipment.

Two Factories for Sale.

Two manufacturing plants located in New York State are being offered for sale. They include power plants, railway sidings and other facilities, and can be obtained separately. These properties are offered by A. V. Roak of Middletown, N. Y.

Yellow-Pine Lands Offered.

What seems to be an exceptional opportunity for the purchase of Southern pine lands is the proposition of W. A. Gayle of Messrs. Marks & Gayle, Montgomery, Ala. Mr. Gayle offers for sale 1840 acres of virgin yellow-pine timber lands, estimated to cut 18,000,000 feet of lumber, which he has owned and protected for 20 years.

Furniture Equipment for Sale.

The entire equipment of a furniture factory is offered for sale by Messrs. D. Wilfong & Sons of Baltimore, Md. Full specifications of the machinery can be obtained by writing to the firm. A 125-horse-power boiler, 75-horse-power engine, duplex pump, Sturtevant heater for dry-kill and various mill supplies, etc., are included.

Concrete-Machinery Exhibits.

Many claims have been made by the different concrete machine manufacturers concerning the results of displays at the recent convention of cement users at Milwaukee, Wis. One of the foremost exhibits there was that of the Ideal Concrete Machinery Co. of South Bend, Ind., and this company says that because of its exhibit it sold many machines to replace concrete machines of other makes.

Paint Industry Wants Capital.

An established paint business in the South needs additional capital in order to extend its trade, and the owner wants to arrange with some investor who will furnish from \$5000 to \$10,000. The owner is a practical man in the manufacture of paint, varnish and japans, and has been operating for 20 years at his present location. Investigate this proposition by addressing "Consux," care of Manufacturers' Record.

Carver Cotton Gin Co.

Progressive ginners throughout the South who are on the alert for improved modern ginning machinery will be interested in the announcement that the Carver Cotton Gin Co. of East Bridgewater, Mass., has appointed a new agent in Atlanta, Ga. This Atlanta office is at 204 People's Building, and C. W. Reneau is in charge. The Carver Company manufactures complete ginning outfits, cottonseed-oil machinery, etc.

The C. D. Pruden Company.

In order to facilitate the execution of the large number of orders it now has on hand the C. D. Pruden Company of Baltimore, Md., has removed its main offices from the Builders' Exchange to its manufacturing

plant at Warner, Dock and Bayard streets. This company manufactures the Pruden automatic-closing fireproof windows, made of copper or galvanized steel, besides producing a general line of sheet-metal work for architectural purposes.

New Westinghouse Appointments.

The Westinghouse Electric & Manufacturing Co. of Pittsburgh has appointed Wm. Clegg, Jr., heretofore special agent in St. Louis territory, as acting manager of the St. Louis office. Mr. D. E. Webster, formerly manager at St. Louis, has been transferred to the Chicago sales office. Another St. Louis employe, J. S. Trifle, has been appointed acting manager of the new district office established by the Westinghouse Company in the New England Building, Kansas City.

To Design Modern Plant.

Messrs. Dodge & Day, engineers, of Philadelphia, Pa., have been commissioned by the Kerr-Murray Manufacturing Co., Fort Wayne, Ind. (manufacturer of gas-works machinery and gasholders), to design, erect and equip a new plant. The present factory is much too small for requirements, and the Kerr-Murray Company has secured a plot of 30 acres close to Fort Wayne. Preliminary work is about completed, and construction work will be started at once.

Offers Good Service.

An opportunity to secure the service of a man who has had practical experience in nearly all departments of construction work is presented to those who need labor of this character. The party referred to claims to understand organizing, systematizing, unit cost-finding, etc., and has designed and superintended the erection of several large plants. He is at present employed, but desires a broader field of activity. For particulars address "Enterprise," care Manufacturers' Record, Baltimore, Md.

Large Orders for Voltax.

The Electric Cable Co. of 17 Battery Place, New York, has received large orders for Voltax, the new insulating compound, from the American Railways Co. of Philadelphia, S. Pearson & Son, contractors on the Pennsylvania tunnel, and from the United Water Improvement Co. of Philadelphia. Reports show that this material has been used successfully both as an insulating compound and as a waterproofing. The Electric Cable Co. reports the sale of this compound in large quantities to 50 leading railway companies in this country and in England, France, Germany and Italy.

Stratton & Bragg Are Busy.

Continued demand is reported for machinery of all kinds throughout the South, and the Stratton & Bragg Company of Petersburg, Va., is obtaining many of the contracts, both for present and future delivery. This company deals extensively in saw-mills, woodworking machinery and supplies generally, besides making a specialty of its variable friction speed saw-mill and its improved light edger and self-feed gang ripper. Those who are in need of machinery of this or kindred character, including engines, boilers, etc., are invited to obtain Stratton & Bragg's quotations before placing contracts.

Some Special Well Work.

A contract has just been completed for removing some difficult obstructions from the well of the Statesboro (Ga.) Ice Manufacturing Co. Besides this there has been erected a 6000-gallon steel tank, a six-inch diameter well has been drilled to a depth of 350 feet, and a 15-horse-power air-lift plant has been installed for pumping that well and filling the tank, the piping in this connection aggregating over 2000 feet. This contract was executed at Louisville, Ga., for Gen. W. W. Jordan of Savannah. An interesting fact is that these two contracts were executed by

the Hughes Specialty Well Drilling Co. of Charleston, S. C.

Important Contract for Kelghley.

Messrs. Heinzmann Brothers have awarded contract for about 700 squares of metal ceiling for the six double barracks at Lawrence, Ind. This contract calls for the lock-joint construction and was awarded to the S. Kelghley Metal Ceiling & Manufacturing Co. of Pittsburgh, Pa. The lock-joint metal ceiling is specified for the government work generally, as it has proven dustproof and airtight, an advantage which the government engineers appreciate, and which is bringing it into great favor with architects and builders throughout the country. The S. Kelghley Metal Ceiling & Manufacturing Co. will send full details to inquirers.

The Nazel Facilities.

The Nazel Engineering and Machine Works of Philadelphia, Pa., reports a large number of inquiries for special machinery, among them being some from Mexico, England, Germany and France for diversified purposes. Recent shipments made were double-head centering machine for locomotive-drive axles, fiber machines for extracting fiber from henequin and palma plants, hoop-bending machines for tank and vat manufacturers, special rolling and cutting machines for candy manufacturers, heading machines for chandelier manufacturers, toilet-paper and paper-box machinery. Business continues good and prospects never were brighter.

The Southern Specialty Co.

North Carolina is becoming very prominent as a center for the location of plants which manufacture furniture and other similar products out of hardwood. Among the new furniture enterprises lately completed is that of the Southern Specialty Co. at Pine Bluff, N. C. This company is located advantageously in the hardwood section, operates its plant by water-power, and began operations on May 1 with many contracts on file. It manufactures high-grade bank and office fixtures, mantels, stairwork and all kinds of special furniture to order in plain and quartered oak. The company is seeking a more extensive market for its products and is ready to correspond in regard to this.

Last Week's Shay Sales.

During the week ending May 12 the following Shay sales were made: Stacey E. Wright, Gettysburg, Wash., one 10-ton Shay; Iatt Lumber Co., Colfax, La., one 28-ton Shay; Sulphur Lumber & Timber Co., Winnfield, La., one 33-ton Shay; Silgo (Mo.) Furnace Co., one 65-ton Shay; Consolidated Lumber Co., Elk, Wash., one 23-ton Shay; Standard Lumber & Shingle Co., Green Spur, Wash., one 45-ton Shay; Ed Rand Lumber Co., Alexandria, La., one 37-ton Shay; Dry Fork Lumber Co., Lanesville, W. Va., one 37-ton Shay, and Horseshoe Lumber Co., River Falls, Ala., one 17x24 10-wheeler. These Shay locomotives are built by the Lima Locomotive & Machine Co. of Lima, Ohio.

New Forge-Shop Equipments.

Numerous large manufacturing establishments are awarding contracts for new forge-shop equipments to be installed during the summer and similar equipments for manual-training schools will be placed in many institutions during the vacation season. Many of the contracts are being obtained by the Buffalo (N. Y.) Forge Co., which is at present busily engaged in manufacturing forge-shop equipments. Recent large orders obtained by the Buffalo Forge Co. have come from the Midvale Steel Co. of Pennsylvania and from the Lynn works of the General Electric Co. Orders are also on file for the Calumet (Mich.) High and Manual Training School and the Indiana Reformatory at Jeffersonville.

Messrs. Jacobs & Co. Busy.

Trade conditions in the Birmingham district continue to be active. Messrs. Solon Jacobs & Co. report prosperous conditions in their various lines—fireproofing, steel plate and refractory work and other construction materials. The firm acts as Southern agent for Messrs. W. G. Bush & Co., manufacturers of hydraulic press brick, Nashville, Tenn.; Hercules Slate Co., manufacturer of roofing and inside slate, Bangor, Pa.; Roebeling Construction Co., manufacturer of fireproof construction and wire laths, St. Louis and New York, and the J. E. Bolles Iron & Wire Works, manufacturer of ornamental iron works, etc., Detroit, Mich. Messrs. Jacobs & Co. have their offices in the Woodward Building, Birmingham, Ala.

Buffalo Forge Co. News.

Mr. Ralph B. Hayward, manager of the Pittsburg office of the B. F. Sturtevant Company, has resigned to accept the manage-

ment of the Chicago branch store of the Buffalo (N. Y.) Forge Co., with which company he began his career in the fan business. The Chicago location is 54-60 South Canal street. Mr. Hayward enters upon his duties June 1. Mr. Arthur J. Vance, superintendent of the Southern Engine and Boiler Works at Jackson, Tenn., will assume charge of the Buffalo Forge Co.'s interests in the Cincinnati district on June 15. He was formerly Cleveland manager for the Buffalo Forge Co., but was compelled to resign that position on account of illness (due to an unfavorable climate), from which he has fully recovered since his location in the South.

Some E. Keeler Orders.

Among some recent orders which the E. Keeler Company of Williamsport, Pa., has secured for its water-tube boilers are 1000 horse-power for the State Hospital for the Insane, Danville, Pa.; also a large self-supporting steel stack and breeching to be used in connection with these boilers. The company is also building 1500 horse-power of water-tube boilers for the Windsor, Essex & Lake Shore Rapid Railway Co., Kingsville, Ontario, and will erect a 7x150-foot self-supporting steel stack and large steel breeching in connection with this, as well as all the pipe work and other construction. It is also building 1000 horse-power of water-tube boilers for the Boyd Equipment Co., New York. These boilers will be placed in the Howard Carroll Building on West street near Cedar street, this being one of the largest buildings that has been erected in New York.

Westinghouse Electric Locomotives.

The Pittsburg factories of the Westinghouse Electric & Manufacturing Co. have received within the past two weeks contracts for 55 electric locomotives. These are to be used for hauling coal in the pit, for transporting materials in the yards of manufacturing plants and by railroad companies, which are discovering the many advantages of this class of motor and using the electric locomotive for hauling freight. It is interesting to recall that the Baldwin Locomotive Works of Philadelphia builds the locomotive proper which the Westinghouse people equip with electrical apparatus. These orders for electric locomotives come from the most discreet purchasers in the field, including the Berwind-White Coal Mining Co. of Pennsylvania, Pittsburg (Pa.) Plate Glass Co., Pocahontas (Va.) Collieries Co., Tennessee Copper Co. of Isabella, Tenn., and others.

A "Tip" from San Francisco.

The Ideal Concrete Machinery Co. of South Bend, Ind., is in receipt of the Builder and Contractor of Los Angeles, Cal., which pays a tribute to hollow-concrete-block construction as follows: "A remarkable fact, says the Oakland Industrial News, in connection with one of the more recent methods of construction—that of using hollow artificial building blocks—is that the largest building of this character in Alameda county was absolutely uninjured by the earthquake. We refer to the four-story paper-box factory of Wempe Bros. at 5th and Adeline streets. This structure has probably a larger percentage of window openings than any building of its class in the State, being designed especially with a view to affording ample light to all parts of the building. There is a church on Waller street, San Francisco, near Golden Gate Park, built of building blocks, which also stood without any apparent damage."

Regarding the Fuller Cotton Gin.

During the conference of cotton growing, merchandising and manufacturing interests at Washington, D. C., two weeks ago Mr. J. W. Orr, one of the English spinners in attendance, made some remarks on the subject of cotton-ginning. These remarks included a reference to the fact that Mr. Orr and his associates from England viewed the Fuller combing gin in operation, and they state they were very much impressed with the superiority of the staple after it had passed through that gin as compared with other cotton gins. Mr. Orr made some highly complimentary references to the work done by the Fuller gin. The Fuller Combing Gin Co. of Charlotte, N. C., is the manufacturer of the ginning machine mentioned, and is now issuing a series of instructive publications regarding its gin. All cotton-growers, ginnermen, manufacturers and others interested in the perfect ginning of cotton should receive the company's publications.

Southern-Built Logging Locomotives

Extensive developments of timber properties throughout the South has created a large demand for logging and manufacturing facilities. These include saw and planing machinery, logging locomotives and mill supplies generally. In manufacturing these requisites for Southern use Southern manu-

facturers are figuring. This prompts reference to the foundry and machine plant of Messrs. Dewey Bros. at Goldsboro, N. C. This firm occupies an area 105x420 and 125x420 feet, its works being equipped with modern machinery and accompanying equipment for the construction of logging locomotives and the manufacture of saw and planing machinery. Messrs. Dewey Bros. also deal in mill supplies, belting, packing, etc., and are agents in Eastern Carolina for the Vulcan Iron Works of Wilkes-Barre, Pa., and sell that company's locomotives at factory prices. Messrs. Dewey Bros. report many orders on file and that the trade is steadily improving.

Interesting Burroughs News.

The Burroughs Adding Machine Co. of Detroit, Mich., makes the following announcement: "May 1 C. N. Smith, who has been connected with the Chicago organization in a special capacity, came to the home office to assist in the conduct of the business-system department. Mr. Smith's experience in the auditing department of the Standard Oil Co. and as special representative for the Baker-Vawter Company of Chicago, the well-known auditors, accountants and systematizers, and lately his experience as salesman for the Burroughs Adding Machine Co., fits him as a system man to assist the force in solving the various problems that may come before it, and his experience as salesman will very materially benefit the character of the advertising suggestion and methods he will offer. In connection with the above, we have made arrangements with E. B. Looker to take a position as an assistant in the systems department with special reference to accounting methods. Mr. Looker was formerly connected with the auditing department of the Standard Oil Co. and the auditing department of the United States Steel Corporation, and lately he has been very successfully connected with N. A. Hawkins & Co., a well-known firm of public accountants, systematizers and auditors of Detroit."

The Result of Advertising.

An emphatic testimonial to the value of judicious advertising in trade publications comes from the Cortright Metal Roofing Co. of Philadelphia, Pa. This company has been advertising in a limited way for some years and had built up a good trade owing to the merits of its products—Cortright metal slates and Victoria shingles. It decided last year to become the leading house of its line, increased its equipment for manufacturing, and then gave attention to greater publicity through advertising. The company then instructed its advertising representatives to contract for liberal space in the leading class publications and to present attractive designs and well-worded cards, talking directly to the people it wished to reach. The measure of success reached is evidenced by an editorial in the May issue of the Cortright Metal Shingle Advocate, which says: "During the past months we have shown through the Advocate illustrations of many imposing structures, big country residences, immense churches, schools and other public buildings covered with Cortright metal shingles. A few years ago architects specified nothing but copper, stone, slate or earthen tiles for such work. Now they find the Cortright metal shingles all the decorative effect of these materials combined, with protective qualities not found in any of those, along with admirable lightness and adaptability to any form or condition of building."

Abner Doble Announcement.

The Abner Doble Company of San Francisco, Cal., has issued the following letter: "During the recent San Francisco fire we suffered some loss, our offices and shops being burned, but we are already resuming business on a larger scale than ever before. We have opened temporary offices at 2611 Broadway, where the business of the company is being conducted for the present. We also have a branch office in Oakland at 668 Broadway. We have now under construction large and new permanent shops and warehouses at 7th and South streets, in the Potrero district, where we will have the most completely equipped works on the Pacific coast. By May 15 part of our manufacturing establishment will be running full force, and within a very few weeks our entire plant will be in complete operation. We lost in the fire some of our correspondence and drawings. In order to check up our files and make our records complete we should like to have you send us as soon as possible copies of all recent correspondence with you that refers to work which has not been closed up. We should also like to have copies of all drawings and blueprints sent you and sent by you to us before the fire. Our organization is intact, and we are now ready to take orders and to carry on our business as before. Your efforts in helping us to complete our files will assist

us materially and will be very greatly appreciated."

TRADE LITERATURE.

Air Appliances for Railways.

"Air Appliances for Railway Service" is the title of a booklet issued by the Ingersoll-Rand Company of No. 11 Broadway, New York. This little publication tells about the air compressors and appliances for railway service manufactured by the company. It is descriptive and illustrated.

Sullivan Continuous Coal Cutter.

Bulletin No. 48-F has been issued by the Sullivan Machinery Co. of Chicago. It explains in detail, accompanied by interesting illustrations, the Sullivan continuous cutter for undercutting coal in room and pillar mines. This machine represents a decided advance over some other methods of mining coal in room and pillar mines, and its superiority is attracting the attention of progressive operators in the coal-mining world.

The Business Man's Sixth Sense.

A scientific system for handling cost accounts in factories and other establishments is referred to in some leaflets issued by Harold A. Wright of 141 Broadway, New York. Mr. Wright refers to his system as "The Business Man's Sixth Sense," and mentions different kinds of enterprises for which his services have been engaged to the benefit of their owners. He makes a specialty of business systems—accounting, auditing, sales promotion, etc.

Broderick & Bascom Rope Co.

Buyers of wire rope for any and all purposes should have at hand a copy of the Broderick & Bascom Rope Co.'s latest price-list, which is now being distributed in convenient form for the pocket. The company named manufactures wire rope for bridges, hoisting purposes, power transmission, dredging and every other purpose to which wire rope can be applied. Its products are well-known throughout the world, and copies of the current price-list can be obtained by addressing the main offices at St. Louis, Mo.

Derrick Swinging Machines.

"Derrick Swinging Machines" is the title of a pamphlet illustrating a full line of labor-saving machines which, it is said, the contractor, quarryman or stonecutter cannot afford to be without. These equipments are used in a great variety of construction work as well as in and around manufacturing plants, and the designs are such as to have recommended them to some of the most exacting buyers in the field. The Mead-Morrison Manufacturing Co. (successor to Rawson & Morrison Manufacturing Co.) of Cambridge, Mass., is the manufacturer of these equipments.

Diehl Motors and Generators.

Diehl motors and generators of the types F and FC are described and illustrated in Bulletin No. 150 issued by the Diehl Manufacturing Co. of Elizabethport, N. J. This company presents these motors and generators with a confidence in their reliability, economy and perfection of design fully warranted by their successful operation in many different varieties of service. These machines are designed in accordance with the most approved modern ideas, and the workmanship and materials of construction are said to be the best obtainable. Particular attention has been paid to details, and every part is adapted to the function which it is to perform.

The New York Edison Company.

Among the current electrical publications which are proving of value to manufacturers and other users of electricity for power and lighting purposes are the New York Edison bulletins. These bulletins are illustrated from photographic views of the use of electricity in multitudinous ways. They refer to electrically-operated machines in various kinds of factories, the lighting of public and private buildings, the use of the electric current in construction work, the adoption of electricity for comfort and convenience in the household and various other subjects of timely interest. The bulletins are issued by the New York Edison Company of 55 Duane street, New York.

The Powell "Union" Composite Disk.

A little leaflet now being distributed gives some data regarding a valve of exceptional merit for hot-water heating and moderate-pressure steam. This is the Powell Improved "Union" composite disk valve manufactured by the William Powell Company of 2521 Spring Grove avenue, Cincinnati, Ohio. In producing this valve the manufacturer has aimed to eliminate the unsatisfactory fea-

tures of other valves, and its merits are endorsed by superintendents, mechanics, engineers and others who have occasion to use such a device. For controlling fluids under moderate pressure the valve occupies a high plane of excellence. Mr. George J. Adams, 26 Cortlandt street, New York, is the agent in this territory.

Asphalt Roofing Information.

Two illustrated booklets now ready for distribution are of decided interest to those who want to be informed regarding roofing and roofing materials. One of them is entitled "The Asphalt Wonder of the World," and contains an interesting description of the asphalt lake on the island of Trinidad. Several illustrations assist the text. The other publication is entitled "The Good Roof Guide-Book," and tells about how Trinidad asphalt is used in the manufacture of Genesco ready roofing, a material which has established a high reputation for superior qualities. It presents some practical suggestions indicating the wisdom and economy of using the best roofing. The Barber Asphalt Paving Co. of Philadelphia, Pa., issues these two booklets.

The Trussed-Concrete Bulletin.

In order to more thoroughly inform architects, engineers and building-owners regarding the merits of the Kahn system of reinforced concrete, the Trussed Concrete Bulletin is now being published. This bulletin, in its first number dated April, presents data regarding the Kahn system which will be of considerable interest to readers, referring, as it does, to a striking example of how a nine-story warehouse in Minneapolis was afire for two hours and then damaged to the extent of about \$500, this minimum amount being pointed to as conclusive proof of the fire-resisting qualities of buildings constructed according to the Kahn system. The Trussed Concrete Steel Co., Wayne County Bank Building, Detroit, Mich., is publishing the bulletin. It controls the Kahn system.

Sand-Lime Brick Machinery.

Modern sand-lime-brick machinery is described in an illustrated pamphlet now current. The designing of the machinery, cars and cylinders shown is the result of six years' experience in Germany and five years in America, and has required a vast amount of deep thought and study. The principal points before the engineer were simplicity, strength, power and durability. That these factors are present in the sand-lime-brick machinery in reference is emphatically claimed by the Semiteel Company of Cleveland, Ohio; offices in the New England Building. This company manufactures and installs the sand-lime-brick machinery mentioned. Its pamphlet gives full details to be considered by those who may contemplate establishing plants for the manufacture of bricks from sand and lime.

Messrs. Allen & Ross.

Derrick equipments are needed in many branches of construction, and manufacturers of these devices have used every effort to perfect their products. Because of the extensive field in which derricks are called for, it is well to mention Messrs. Allen & Ross, offices in the Pennsylvania Building, Philadelphia, Pa., who manufacture derricks and furnish engines to accompany same. Messrs. Allen & Ross succeed Allen & Taylor, who have made a reputation for their derricks and derrick fittings, and are now distributing an attractive catalogue which illustrates a number of equipments the firm has placed with well-known industrial companies, besides describing the equipments and detailing their various parts. Catalogues can be obtained on application.

The Great New Industry.

It is sometimes said that the manufacture of cement building blocks, sewer pipe, tiles and kindred articles is the great new industry. The Great New Industry is the title of an illustrated book which has been published for the purpose of informing people as to the cement stone industry, and the information it contains is of such a timely character that it should be brought to the attention of architects, builders, owners of houses and others who are interested in the construction of buildings with improved materials, especially cement stone, which is gaining such great favor everywhere. The book contains 84 2x12 pages and covers the four leading branches of the concrete industry—the making of cement blocks, cement brick, cement sewer pipe and drainage tile, and cement sidewalk tile, including almost every tool and appliance known to operators in any of these branches. Besides this general information, it is a book of Miracle machinery, and is intended as a reliable guide for the cement user. The Miracle Pressed Stone Co.,

of Minneapolis issues the book in the interest of its own machinery, designed for the manufacture of cement products used for construction purposes, as well as presenting general information for readers. The company will send a copy of the book to inquirers who may want to investigate the great new industry. Write for Catalogue D7.

Bleichert Wire-Rope Tramways.

The Bleichert system of wire-rope tramways is one whereby the material is carried in receptacles suspended from carriage running on stationary overhead cables in a continuous circuit, the loaded carriers along one cable and the empties returning along a lighter cable parallel with this, motion being imparted by means of a light endless traction rope to which the carriers are gripped. No matter what the contour of the ground, a Bleichert tramway will take the material in a bee-line from where it is produced to where it is to be delivered without rehandling, the cost being stated as from two cents to five cents per ton a mile. An illustrated pamphlet is now being issued to detail this system and its latest improvements. The Trenton Iron Co. at Trenton, N. J., manufactures the Bleichert system. It also designs and manufactures equipments for wire-rope tramways adapted to special conditions.

Portable Electric Hoists.

The substitution of power for hand work is productive of economy in the moving of material, as is well known to many manufacturers and others. The conditions are being met by the portable electric hoist, which is an economical device, even where substituted for cheap labor, for either occasional or constant use, because of the modern investment of capital required, low cost of operation and the facility with which it adapts itself to its surroundings. Costly expert attendance is not necessary, as a workman intelligent enough to use the simplest tools can operate it. The Yale & Towne portable electric hoists have established an enviable reputation for their qualities of merit. They are fully described, assisted by photographic reproductions of parts and complete equipments in use in all kinds of industrial plants, in the latest catalogue being issued by the manufacturer, the Yale & Towne Manufacturing Co., general offices 9-15 Murray street, New York city.

Andrews Dry-Kilns.

A certain specialist in designing and manufacturing dry-kilns has had an experience of 40 years. Its first successful effort was in drying the lumber without injury; next came the demand for quick drying, and then came the call to reduce the cost of drying. In the improved equipments of the latest type it is claimed these features are combined in the apparatus referred to, and manufacturers who need dry-kilns should not fail to investigate. The A. H. Andrews Company of Chicago, Ill., is the manufacturer mentioned, and the Andrews dry-kilns are fully illustrated and described in new catalogue "C" now being distributed. The company controls many valuable patents covering dry-kilns, their equipment and mechanical dryers. It has installed many of these kilns to the great satisfaction of purchasers, and new buyers are selecting the Andrews equipment every day as they become acquainted with its merits. Write the company for catalogue "C."

Just Some Advertising Literature.

One may readily secure leaflets, pamphlets, booklets or other publications intended for advertising purposes which may be referred to as "just some advertising literature." But not all advertising literature advertises the product which it is intended to exploit, as there is a great quantity of advertising which rather advertises the incapacity of whoever prepared it. A specimen of advertising literature that undoubtedly accomplishes its purpose is seen in some cards, leaflets, wall-hangers and pamphlets which tell about the superior qualities of Leviathan belting, manufactured by the Main Belting Co. of Philadelphia, Pa. One pamphlet quotes Scripture, saying "There is that Leviathan," which seems to be evidence that the inspired writers of some centuries ago foresaw the coming of a perfect belting. A leaflet referring to Richard III's remark, "An honest tale speeds best being plainly told," shows the connection of this with the use of Leviathan belting in brick plants. Another pamphlet presents a photographic view of a Leviathan conveyor belt 2000 feet long which has been delivering one ton of washed gravel per minute for the past four seasons without any appreciable sign of wear. This Leviathan belting literature is unusually creditable handwork of the modern printer, and the originality displayed in the ideas taken advantage of are doubtless bringing substantial results to the Main Belting Co.

PROGRESS TOWARD BALTIMORE'S SEWERAGE.

By CALVIN W. HENDRICK, Chief Engineer Baltimore Sewerage Commission.

[Written for the Manufacturers' Record.]

At the inception of the work the very first and most important thing was, of course, the organization of a proper and efficient engineering force. This I believe we have accomplished, and the organization as completed embraces the following divisions and departments:

High-level division, low-level division, disposal division, storm-water division, drafting department and pumping plant.

As you know, in addition to the \$10,000,000 sanitary sewerage system, which is the main object for which the sewerage commission was created, the city has decided that the commission shall also undertake the work of designing and reconstructing the storm-water sewers. This of itself is a big undertaking.

We have found it necessary to thoroughly investigate a great variety of subjects, mapping out the results in such shape as to facilitate the study of them for our own especial purposes. A few of the most important of these subjects may be cited, such as the geological condition underlying the city, existing sewers and obstructions on the surface and below the ground, the past, present and probable future population of the city, mapped out in such a way as to show the number of inhabitants per acre, the water consumption per capita, ground water, rainfalls and run-offs, condition of surrounding country as to adaptability for disposal beds, lines for outfall sewers, establishment of laboratory, sampling of the city water and the city sewage, also the water of the basin, Patapsco river and the bay, available local materials, prices, etc., and making an entirely new map of the city.

As an index of the progress that has been made, I quote below some extracts from my last report to the commission, under date of May 10:

"I have been in constant communication with the board of advisory engineers, and have been forwarding them from time to time additional information regarding the disposal works and outfall sewer."

"About 350 miles of surveys have been made, as it is most important for the commission to know the present existing condition of the city from their own surveys and elevations."

"We are about completing our investigation of the storm-water sewers of the city, all of which have been entered through the manholes, and the elevation of inverts and sizes taken, condition of the sewer noted, etc."

"We have now almost completed a map showing the existing sanitary pipes."

"The working out of the plan for the storm-water sewers and for the system of lateral sanitary sewers is a very tedious operation, and quite extensive in its many ramifications. We are endeavoring to work out the plans for these two simultaneously, so that they will fit in as to their crossing, etc., with the least possible expense of construction. Excellent progress is being made in both of these studies."

"Since starting on the work the latter part of January the office force has made a great many blueprints and drawings, and have filled a large number of books with notes, calculations, etc."

"Among our first investigations were those concerning certain sections of Anne Arundel county containing sandy soil, which it was thought would furnish ideal locations for filter beds. These investigations developed the fact that the sand contained a large amount of clay, and was also underlaid with a strata of very hard clay, thus making the soil impervious to water instead of porous, as it should be

for filtration purposes. The advisory engineers wished to be positive regarding the receptive powers of this soil before abandoning the idea of using large areas of the natural soil for filter beds. We therefore designed and established an experimental station on the Western Maryland Railroad pier at Port Covington * * *. The plant is situated at the far end of the pier, which is an ideal location. It is near Anne Arundel county, and the water used for fire protection has furnished an abundant supply for our purposes, while all of the waste water is disposed of by allowing it to pass through the floor of the pier into the harbor.

"In order to carry out these experiments eight tanks were constructed. Five of these, Nos. I-V * * *, are constructed of galvanized iron, and the area of each is one ten-thousandth of an acre. These were filled with five inches of gravel, over which is placed three feet eight inches of the soil to be tested. These five tanks are for the purpose of determining the friction of the water in passing through the sand and the rates at which these soils will filter water or sewage.

"Tank No. VI is a wrought-iron pipe eight inches in diameter, and is filled with the same depth of gravel and soil as the larger tanks. The purpose of this tank is to ascertain the capillary powers of the soils or the quantity of moisture retained in the soil at different depths and for different lengths of time.

"In the filtration of sewage it is necessary, in order to obtain the most efficient results, to have a material which will readily drain and allow the air to enter the interstices of the sand, as purification in filters will not occur unless air is present. If the moisture is held in the soil by capillary attraction, it excludes just that much air and so reduces the efficiency of the filter or the rate at which it is possible to apply the sewage to the surface of the filter.

"Tanks Nos. VII and VIII are also of wrought-iron pipe eight inches in diameter, and are duplicates of the largest tanks, only on a smaller scale. The purpose of these tanks is to determine the effect of different percentages of clay and loam on the filtering properties of various sands. Clean, washed sand was first used in these tanks, and to this clean sand varying percentages of clay and loam were added and the effect carefully studied. In addition to these tests, various physical and chemical properties of the sands and soils will be determined in the chemical laboratory, additional apparatus for these special tests having been secured by the commission.

"Our experiments have demonstrated very thoroughly to the advisory engineers certain facts which they wished to know regarding the soils, and, as remarked by one of them, 'the results of this experimental station will make interesting reading, as it covers a stage that has not before been embraced in any previous report. All of this data has been carefully recorded, and will make its appearance in our annual report. In addition to the various studies that we are now pursuing, we are at work blocking out contract drawings covering certain portions of the city, on which the details will be placed later."

From the extracts quoted above you will be able to gain a good general idea of what has been accomplished up to the present time.

We hope to receive the report from the advisory engineers, Messrs. Hering, Gray and Stearns, as to the method of disposal

of the sewage, between now and the 1st of June, and immediately on receipt of it we will take up the question of outfall sewers and disposal plant, making wash borings along the lines of the intercepting and outfall sewers and the pumping station, specifications for which we are now at work upon.

One of the gratifying things which has been accomplished by the undertaking of this great work is the widespread interest it has aroused throughout the world and the attraction of notice from other countries and communities to Baltimore. I have received scores of letters from all over the world.

GREENVILLE'S OPPORTUNITIES.

Views of Business Men Regarding That Section of Mississippi.

[Special Cor. Manufacturers' Record.]

Greenville, Miss., May 11.

"It is better to go forward slowly than 'round and 'round ever so fast is as true of the building of a city as it is of the making of a business," said Mr. T. C. Holmes, president of the Business Men's League of this city. "We hear every day of certain municipalities 'booming,' and while it is stated with the intention of indicating the progressiveness of a town, it is, in my opinion, detrimental to its best interests. For this reason I vigorously challenge the statement that Greenville is on a boom. The wonderful but substantial growth of this city can be attributed, first, to the unbounded confidence of her people in her unlimited resources and the investment of millions in various enterprises; secondly, her commanding geographical position. In the past few years we have laid paved streets and granolithic sidewalks that would do credit to a city of 100,000 population. Electric railroads traverse the entire city. Her elegant public-school buildings and educational facilities are not surpassed in any city. Her bank buildings, hotels, clubs and churches represent hundreds of thousands of dollars. The manufacturing enterprises are numerous, using machinery only of the latest and most modern types. The water and sewerage system is perfect. On every hand is to be found overwhelming proof of the confidence her own people have in her brilliant future. Can more be said to endorse a city? Another great factor that will have a determining influence in Greenville's future growth is her enviable geographical position. Being situated in the heart of the famous Yazoo Delta, surrounded by the richest cotton and timber lands on earth, having the advantage of the great Mississippi river, which confers the benefit of competing freight rates with the great railroad systems, the Illinois Central and the Southern, and being the terminus of the latter, it offers to manufacturers the grandest opportunities for the locating of plants. Raw material can be had in unlimited quantities, while freight rates on the finished product to the Northern markets are extremely low.

"The advantages of this section are not being overlooked by investors, with a result that in a few years it will be known as the great manufacturing center, as well as the richest country on earth.

"Natural advantages avail but little in the enrichment of a country or its people without the completest development. No locality can attain its highest possibilities which exports raw material alone. Labor expended in the transformation of raw material into the finished commodity gives the latter value. Unskilled labor producing raw material enriches that section which affects the transformation. It is for this reason that Greenville invites manufacturing enterprises, which will enrich themselves while benefiting her and her people. Such enterprises as are here have demonstrated the accuracy of this view; to

them, to the fact that they have found cheap raw material at their doors, with excellent transportation facilities for their finished product, as well as the energy and industry of our people, is much of our past growth due. We need more capital. We have made money with our own. Others can make money with theirs. It is a business matter which should commend itself to those whose business sense has made them successful in localities offering fewer advantages.

"For those who desire to live in an up-to-date, progressive town, offering many advantages for the rendering of life pleasant as well as profitable, while increasing their store of worldly goods, Greenville has but to be seen to be appreciated. To the investor she offers an excellent field for profit, a pleasant and healthful home and a hearty welcome."

"Much has been written and said at various times concerning a 'poor man's country,'" said Mr. W. G. Stimmel, "but let me say that of all countries with which I am familiar, the Yazoo valley of Mississippi is the only really and sure enough poor man's country that I have ever seen. No man is so poor that he cannot have an opportunity here to gain financial independence, and possibly riches. All that he needs is a healthy body, two good hands and intelligence and energy enough to use them. Any man with such an equipment need have no capital at all, but will find plenty who will be glad to house, feed and furnish him with all the equipment necessary to raise a crop, charging such equipment and furnishing against the crop which he is raising. Hundreds have started in this way, and have prospered beyond their most sanguine dreams."

"The Italians are making their beginning in this way, with the additional handicap of having steamship passage from Italy to America charged against their account; however, with this additional expense, many pay for their living and equipment and have a handsome surplus at the end of their first year in America. What these Italians can do any ambitious American can surely do, and many white men from the North as well as from the South have done equally well."

"Why Americans will go to Canada to live under an alien flag, to brave the rigors of a semi-Arctic winter, when there is a place of such opportunity, with such productive soil and such a balmy climate in our own good land, under our own flag, is a question which finds its answer not in reason nor because the advantages of Canada can touch in the slightest degree the advantages offered by this Southland, but because the Canadian government and the Canadian railroads have for years past been spending immense sums of money in a campaign for immigration to fill their vast waste areas in Northwestern Canada with people from the United States, beguiling them with the glamour of cheap land."

"I have lived for years near our Northern borders, and when I speak of the advantages of the Mississippi Delta as compared with those of the far North, I know what I am talking about, and I know that there is no country which gives to its people such possibilities from an agricultural standpoint as is given here."

"This is the true haven for those great numbers of agricultural people who are toiling and sweating beneath the burden of a weary life, trying to raise crops on barren hills and lands long since exhausted, or those who are struggling beneath a burden of heavy rents; to such we extend an invitation, which, if accepted, and the same amount of energy applied here as where they are, will bring prosperity, comfort and happiness. It would not be right if I did not say that proportionate advantages are offered to the man of moderate

means and to the capitalist as is offered to the man with no capital at all."

"Lands can be bought in this valley which will pay a cash rent of \$6 and \$7 per acre for one-third of what the same lands can be purchased for in Indiana and Illinois, with this difference, that the renter in Indiana and Illinois has a hard time paying his rent, while here the rent represents only a small part of the total crop produced. Thus capital and labor can both meet happy on common ground in this favored country."

W. H. Negus, president of the First National Bank, Greenville, Miss., said:

"Owing to the short cotton crop, last season proved an unprofitable one. We are now feeling the results of it, and Greenville business is rather slow as a consequence. However, the outlook gives promise of a good crop for 1906 and 1907, together with substantial prices, probably not less than 11 cents per pound. Greenville handles as much as \$0,000 bales in a season. We have here four large cotton-oil mills, two compresses operated by the Gulf Compress Co., Memphis, Tenn.; also several lumber and planing mills. There is a fine opening here for a large cotton mill, and the only drawback that presents itself would be the difficulty in obtaining labor. Without more hands and of a suitable character it would be difficult, if not impossible, to successfully conduct a cotton mill. All other necessary conditions are here, however, in abundance. Planters are now getting a superior class of Italian labor, and we are in hope of having many more come to the Delta of the same class. The Italian will not squander his earnings like the negro, with the result that, unlike the negro, the tradesman can always collect his accounts from him when due."

"Landowners from Indiana and Illinois are investing quite freely in lands in the Delta, not a few of them having come to stay permanently. I think it would be a most desirable thing if adequate steps were taken to call the attention of Northern farmers and agriculturists of the better class in Europe to the splendid opening which the South and Southwest offers in the matter of investments in lands. Millions of acres of fertile soil await development not only in the Mississippi valley, but also in Texas, Oklahoma, Arkansas and Indian Territory."

"These lands, a great proportion of them being more productive even than the rich loamy soil of Illinois, can be obtained at prices which absolutely guarantee a large return on an investment. We have land in the valley which can be purchased at \$40 per acre richer than any in Illinois, where \$200 would be obtainable for same character of land. By purchasing such land and renting it a profit of 12 per cent. is assured, and by operating it instead of renting 25 per cent. profit is assured. The MANUFACTURERS' RECORD stands unrivalled in the great work it is doing for the South. I peruse its columns with unfailing interest weekly."

JOHN BANNON.

To Hardware Men.

Mr. L. M. Davis, secretary of the Commercial Club of Joplin, Mo., in writing to the MANUFACTURERS' RECORD in search of a man well versed in the wholesale hardware business and with \$10,000 to invest in it, says:

"Joplin presents the best opportunity in the United States for a wholesale hardware house, and a good business man can interest local capital in the enterprise, provided he has some capital of his own. The jobbing business in Joplin is well protected by freight rates, and a wholesale hardware house could easily be made a paying investment."

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., May 16.

As usual of late, the chief feature of the Baltimore stock market during the past week has been United Railways issues, speculation centering around the common stock and the income bonds. The variation in the price of the stock was only fractional, but the incomes showed a range of two points. Generally the market was quiet and without particular interest.

In the trading United Railways common sold from 16 1/4 to 16 and the common trust certificates from 16 1/4 to 16 1/2; the income bonds went from 70 1/4 to 72 1/4, reacting to 71 1/2, with last sale at 71 1/2; the income trust certificates from 69 1/4 to 71; the 4s sold at 92 1/2 to 92. Consolidated Gas 6s were dealt in at 106 1/2; Seaboard common at 30; the new common from 28 3/4 to 29 1/2; the preferred at 50; Seaboard 4s at 87 1/2 to 87 3/4, and the 10-year 5s from 101 to 101 1/4; Cotton Duck 5s at 85 to 84 1/4; G. B. S. Brewing incomes at 32 1/4 to 32 1/2, and the 1sts from 60 1/2 to 61. G. B. S. common sold at 8 1/2 to 8 1/4.

Bank stocks sold as follows: Mechanics', 25 1/4; Merchants', 182 1/2; Farmers and Merchants', 54.

United States Fidelity & Guaranty sold from 122 1/2 to 120.

Other securities were traded in as follows: Northern Central Railroad stock from 99 to 99 1/4, one share, however, bringing 100; Baltimore Brick common, 8; the preferred, 46; Atlantic Coast Line rights from 4 1/4 to 3 1/2; do. of Connecticut, 50; Georgia, Carolina & Northern 5s, 111 1/2 to 111 1/4; Maryland & Pennsylvania incomes, 69; Norfolk Railway & Light 5s, 99 1/2; Baltimore City 3 1/2s, 1930, 105 1/4 to 106; do. do. 1928, 105; Florida Southern 4s, 97 1/4; Baltimore, Chesapeake & Atlantic preferred, 62 1/4; Baltimore & Ohio rights from 1 to 5/8; Atlantic Coast Line, half paid, 93 1/2 to 95; Atlantic Coast Line 4s, 99 1/4; do. new 4s, certificates, 91; Atlantic Coast Line of Connecticut, 302 1/2 to 355; do. do. 4s, certificates, 91; do. do. do. 5-20s, 91; Baltimore, Sparrow Point & Chesapeake 4 1/2s, 97; Houston Oil common, 8 1/4 to 8 1/2; Carolina Central 4s, 97; Colorado Southern 4s, 94 1/4; Georgia & Alabama 5s, 110 1/2 to 110 1/4; Alabama Consolidated Coal & Iron 5s, 91; Amalgamated Copper, 100 to 110 1/4; Western Maryland stock, 19%; North Carolina 6s, 130 1/4; Potomac Valley 5s, 115 1/4; Western Maryland 4s, 86; Wabash Debenture Bs, 79 1/4; Western Maryland 2d 4s, 72; Newport News & Old Point 5s, 99.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended May 16, 1906.

Railroad Stocks.	Par.	Bid.	Asked.
Atlanta & Charlotte.....	100	100	100
Atlantic Coast Line of Conn.....	100	350	360
Georgia Southern & Florida.....	100	41	41
Georgia Sou. & Fla. 1st Pref.....	100	87	89
Georgia Sou. & Fla. 2d Pref.....	100	82	82
Seaboard Railway Common.....	100	30	30
Seaboard Company Common.....	100	28	29
Seaboard Company 2d Pref.....	100	56 1/2	59 1/2
United Railways & Elec. Co.....	50	15 1/2	16

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	28	29
Commercial & Far. Nat. Bank.....	100	130	140
Com. & Far. Nat. Bk., Blue Cts.....	100	145	160
Farmers & Mer. Nat. Bank.....	40	55	55
German Bank.....	100	108 1/2	110
National Bank of Baltimore.....	100	117	120
National Bank of Commerce.....	15	25 1/2	26 1/2
National Mechanics' Bank.....	10	25 1/2	26 1/2
National Union Bank of Md.....	100	120	120

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding & Trust.....	50	35	50
Continental Trust.....	100	192 1/2	196
Fidelity & Deposit.....	50	135	139
Mercantile Trust & Deposit.....	50	141	145

Union Trust.....	50	62
U. S. Fidelity & Guaranty.....	100	115
Miscellaneous Stocks.		
Alabama Con. Coal & Iron.....	100	50 70
Ala. Con. Coal & Iron Pref.....	100	92
Consol. Cotton Duck Common.....	50	10 12
Consol. Cotton Duck Pref.....	50	30 34
Consolidated Gas.....	100	80 1/2 85
Consolidation Coal.....	100	89 92 1/2
G. B. & S. Brewing Co.....	100	84 9
George's Creek Coal.....	100	75

Railroad Bonds.			
Albany & Northern 5s, 1946.....	95	103	103
Atlanta & Charlotte 1st 5s, 1907.....	100	103	103
Atlan. Coast Line 1st Con. 4s, 1932.....	99 1/2	99 1/2	99 1/2
Atlantic Coast Line 4s, Cts., 1932.....	90	91	91
Atlantic Coast Line (Conn.) 5s.....	112	112	112
Atlantic Coast Line (Conn.) 4s.....	91	91	91
Balto. & Harrisburg Ext. 5s, 1938.....	105	105	105
Carolina Central 4s, 1949.....	96 1/2	96 1/2	96 1/2
Charleston & West. Car. 5s, 1946.....	110 1/2	110 1/2	110 1/2
Coal & Iron Railway 5s, 1930.....	105	106	106
Coal & Southern 4s, 1940.....	95 1/2	97 1/2	97 1/2
Georgia & Alabama 5s, 1945.....	110	110 1/2	110 1/2
Georgia, Car. & North. 1st 5s, 1929.....	111	112 1/2	112 1/2
Georgia Pacific 1st 6s, 1922.....	121	121	121
Georgia South. & Fla. 1st 5s, 1945.....	112 1/2	112 1/2	112 1/2
Maryland & Pennsylvania 4s, 1951.....	94	95	95
Petersburg, Class B 6s, 1926.....	117	117	117
Potomac Valley 1st 5s, 1941.....	115	117	117
Richmond & Danville Gold 5s, 1915.....	115	115 1/2	115 1/2
Savannah, Fla. & West. 5s, 1934.....	115	115	115
Seaboard Air Line 4s, 1950.....	101 1/2	101 1/2	101 1/2
Seaboard Air Line 5s, 10-year, 1911.....	101 1/2	101 1/2	101 1/2
Seaboard Air Line 5s, 3-year.....	101	101	101
Seaboard & Roanoke 5s, 1925.....	110	111	111
Southern Railway Con. 5s, 1994.....	117	117	117
Virginia Midland 2d 6s, 1911.....	109	110	110
Virginia Midland 4th 3-4-5s, 1921.....	108	110	110
Virginia Midland 5th 5s, 1926.....	111	111	111
Western Maryland new 4s, 1952.....	85 1/2	86 1/2	86 1/2
West. North Carolina Con. 5s, 1914.....	113	114 1/2	114 1/2
West Virginia Central 1st 6s, 1911.....	108	108	108
Wilmington, Col. & Aug. 5s, 1910.....	108	108	108
Wilmington & Wel. Gold 5s, 1935.....	117	119	119

Street Railway Bonds.			
Atlanta Con. St. Rwy. 5s.....	103 1/4	103 1/4	103 1/4
Augusta Rwy. & Elec. 5s, 1940.....	104	104	104
Baltimore City Passenger 5s, 1911.....	103	104	104
Baltimore Traction 1st 5s, 1929.....	114	117	117
Central Ry. Con. 5s (Balto.), 1932.....	114 1/2	115 1/2	115 1/2
Central Ry. Ext. 5s (Balto.), 1932.....	116	116	116
Charleston City Railway 5s, 1923.....	105	105	105
Charleston Con. Electric 5s, 1909.....	94	95 1/2	95 1/2
City & Suburban 5s (Balto.), 1922.....	113 1/4	113 1/4	113 1/4
City & Suburban 5s (Wash.), 1948.....	108	108	108
Knoxville Traction 1st 5s, 1923.....	107	107	107
Lexington Railway 1st 5s, 1949.....	103 1/2	105	105
Macon Rwy. & Lt. 1st Con. 5s, 1953.....	99	99	99
Metropolitan 5s (Wash.), 1925.....	114	114	114
Newport News & Old Pt. 5s, 1938.....	97 1/2	100	100
Norfolk Railway & Light 5s.....	99 1/2	99 1/2	99 1/2
Norfolk Street Railway 5s, 1944.....	108	112	112
North Baltimore 5s, 1942.....	120	120	120
United Railways 1st 4s, 1949.....	91 1/2	92	92
United Railways Inc. 4s, 1949.....	71 1/2	71 1/2	71 1/2

Miscellaneous Bonds.			
Alabama Consol. Coal & Iron 5s.....	90 1/4	91	91
Atlanta Gaslight 1st 5s, 1947.....	102	102	102
Consolidated Gas 6s, 1910.....	106 1/2	106 1/2	106 1/2
Consolidated Gas 5s, 1939.....	112	113	113
Consolidated Gas 4 1/2s, Cts., 1939.....	98 1/2	100	100
G. B. & S. Brewing 1st 3-4s.....	60 1/2	61 1/4	61 1/4
G. B. & S. Brewing 2d Income.....	32	32 1/2	32 1/2
Maryland Steel 5s.....	103 1/2	103 1/2	103 1/2
Maryland Telephone 5s.....	95	97	97
Mt. V. & Woodby's Cot. Duck 5s.....	84 1/2	85	85
United Elec. Light & Power 4 1/2s.....	93 1/2	96	96

SOUTHERN COTTON-MILLSTOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending May 14.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	96	90
Aiken Mfg. Co. (S. C.).....	85	90
Anderson Cotton Mills (S. C.).....	104	106
Arkwright Mills (S. C.).....	120	123
Augusta Factory (Ga.).....	80	85
Avondale Mills (Ala.).....	100	110
Belton Mills (S. C.).....	100	110
Bibb Mfg. Co. (Ga.).....	110	122
Brandon Mills (S. C.).....	109	111
Cabarrus Cot. Mills (N. C.) new.....	120	130
Chadwick Mfg. Co. (N. C.) Pfd.....	102	102
Chiquola Mfg. Co. (S. C.).....	89	91
Clifton Mfg. Co. (S. C.).....	124	127
Clifton Mfg. Co. (S. C.) Pfd.....	102	106
Clinton Cotton Mills (S. C.).....	135	145
Columbus Mfg. Co. (Ga.).....	98	98
Conaway Mfg. Co. (S. C.).....	97	97
Dallas Mfg. Co. (Ala.).....	97	99
Darlington Mfg. Co. (S. C.).....	59	60
Eagle & Phenix Mills (Ga.).....	125	126
Easley Cotton Mills (S. C.).....	132	133
Enoree Mfg. Co. (S. C.).....	77	80
Enoree Mfg. Co. (S. C.) Pfd.....	100	102
Enterprise Mfg. Co. (Ga.).....	86	92
Exposition Cotton Mills (Ga.).....	200	200
Gaffney Mfg. Co. (S. C.).....	87 1/2	89 1/2
Gainesville Cotton Mills (Ga.).....	25	40
Granby Cot. Mills (S. C.) 1st Pfd.....	69	69
Graniteville Mfg. Co. (S. C.).....	160	166
Greenwood Cotton Mills (S. C.).....	95	96
Grendel Mills (S. C.).....	110	115
Henrietta Mills (N. C.).....	200	200
King Mfg. Co., John P. (Ga.).....	97	103
Lancaster Cotton Mills (S. C.).....	102	106
Lancaster Cot. Mills (S. C.) Pfd.....	97	97
Langley Mfg. Co. (S. C.).....	92	96
Laurens Cotton Mills (S. C.).....	100	104
Limestone Mills (S. C.).....	104	104
Lockhart Mills (S. C.).....	100	103
Lockhart Mills (S. C.) Pfd.....	97	100
Louise Mills (N. C.).....	94	94
Louise Mills (N. C.) Pfd.....	102	102
Mariboro Cotton Mills (S. C.).....	73	76
Mayo Mills (N. C.).....	165	185
Mills Mfg. Co. (S. C.).....	105	105
Mills Mfg. Co. (S. C.) Pfd.....	100	100
Monaghan Mills (S. C.).....	104	104
Monarch Cotton Mills (S. C.).....	84 1/2	84 1/2
Newberry Cotton Mills (S. C.).....	110	116
Norris Cotton Mills (S. C.).....	107	110
Odell Mfg. Co. (N. C.).....	88	91
Orangeburg Mfg. Co. (S. C.) Pfd.....	90	97
Orr Cotton Mills (S. C.).....	101	104
Pacolet Mfg. Co. (S. C.).....	177	180
Pacolet Mfg. Co. (S. C.) Pfd.....	103	104
Pelzer Mfg. Co. (S. C.).....	169	173
Piedmont Mfg. Co. (S. C.).....	169	171
Pos Mfg. Co. (S. C.).....	125	129
Raleigh Cotton Mills (N. C.).....	99	104
Richland Cot. Mills (S. C.) Pfd.....	51	56
Roanoke Mills (N. C.).....	144	150
Saxon Mills (S. C.).....	100	106
Sibley Mfg. Co. (Ga.).....	64	68
Southern Cotton Mills (N. C.).....	80	80

Spartan Mills (S. C.)	140	146
Springstein Mills (S. C.)	141	100
Trion Mfg. Co. (Ga.)	142	142
Tucapau Mills (S. C.)	160	166
Victor Mfg. Co. (S. C.)	116	120
Warren Mfg. Co. (S. C.)	106	99
Warren Mfg. Co. (S. C.) Pfd.	106	99
Washington Mills (Va.)	18	26
Washington Mills (Va.) Pfd.	95	99
Whitney Mfg. Co. (S. C.)	143	150
Wiscasset Mills (N. C.)	122	135
Woodruff Cotton Mills (S. C.)	105	106 1/2

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending May 14.

	Bid.	Asked
Abbeville Cotton Mills (S. C.)	95	99
Aetna Cotton Mills (S. C.) Pfd.	70	89
Alken Mfg. Co. (S. C.)	85	89
American Spinning Co. (S. C.)	112	112
Anderson Cotton Mills (S. C.)	103	106
Arcadia Mills (S. C.)	89	92
Arkwright Cotton Mills (S. C.)	120	120
Augusta Factory (Ga.)	87	88
Avondale Mills (Ga.)	87	87
Belton Mills (S. C.)	108	110
Bibb Mfg. Co. (Ga.)	108	100
Brandon Mills (S. C.)	109	112
Brogan Mills (S. C.)	77	80
Cabarrus Cotton Mills (N. C.)	137	137
Chadwick Mfg. Co. (N. C.) Pfd.	103	103
Chiquola Mfg. Co. (S. C.)	90	100
Clifton Mfg. Co. (S. C.)	125	130
Clifton Mfg. Co. (S. C.) Pfd.	103	103
Clinton Cotton Mills (S. C.)	82	90
Columbus Mfg. Co. (Ga.)	94	97
Courtenay Mfg. Co. (S. C.)	100	103
Dallas Mfg. Co. (S. C.)	89	95
Darlington Mfg. Co. (S. C.)	59	63
D. E. Converse Co. (S. C.)	115	115
Eagle & Phenix Mills (Ga.)	120	120
Easley Cotton Mills (S. C.)	130	135
Enoree Mfg. Co. (S. C.)	85	90
Enoree Mfg. Co. (S. C.) Pfd.	100	103
Enterprise Mfg. Co. (Ga.)	82	90
Exposition Cotton Mills (S. C.)	174	200
Gaffney Mfg. Co. (S. C.)	85	90
Gainesville Cotton Mills (Ga.)	28	28
Glenwood Cotton Mills (S. C.)	102	105
Gluck Mills (S. C.)	97	97
Granby Cot. Mills (S. C.) 1st Pfd.	60	60
Graniteville Mfg. Co. (S. C.)	157	157
Greenwood Cotton Mills (S. C.)	95	95
Grendel Mills (S. C.)	112	112
Hartselle Cotton Mill (S. C.)	92	92
Henrietta Mills (S. C.)	200	200
Inman Mills (S. C.)	97	103
King Mfg. Co. (S. C.)	97	103
Lancaster Cotton Mills (S. C.)	100	106
Lancaster Cot. Mills (S. C.) Pfd.	95	99
Langley Mfg. Co. (S. C.)	92	96
Laurens Mills (S. C.)	170	170
Limestone Mills (S. C.)	104	104
Lockhart Mills (S. C.)	99	104
Lockhart Mills (S. C.) Pfd.	101	101
Loray Cotton Mills (N. C.) Pfd.	85	85
Louise Mills (N. C.)	94	94
Louise Mills (N. C.) Pfd.	102	102
Marlboro Cotton Mills (S. C.)	67	75
Mayo Mills (N. C.)	150	200
Mills Mfg. Co. (S. C.)	100	100
Mills Mfg. Co. (S. C.) Pfd.	99	101
Molokoh Mfg. Co. (S. C.)	90	95
Monaghan Mills (S. C.)	99	104
Monarch Cotton Mills (S. C.)	84	89
Newberry Cotton Mills (S. C.)	115	115
Ninety-Six Cotton Mills (S. C.)	95	95
Norris Cotton Mills (S. C.)	106	106
Odell Mfg. Co. (N. C.)	90	90
Orangeburg Mfg. Co. (S. C.) Pfd.	80	80
Orr Cotton Mills (S. C.)	101	105
Pacolet Mfg. Co. (S. C.)	177	177
Pacolet Mfg. Co. (S. C.) Pfd.	102	104
Pelzer Mfg. Co. (S. C.)	170	173
Piedmont Mfg. Co. (S. C.)	170	175
Poe Mfg. Co. (S. C.)	125	130
Raleigh Cotton Mills (N. C.)	100	100
Richland Cotton Mills (S. C.) Pfd.	60	60
Roanoke Mills (N. C.)	118	118
Saxon Mills (S. C.)	102	104
Sibley Mfg. Co. (Ga.)	58	63
Southern Cotton Mills (N. C.)	80	80
Spartan Mills (S. C.)	145	145
Springstein Mills (S. C.)	100	100
Trion Mfg. Co. (Ga.)	132	140
Tucapau Mills (S. C.)	160	160
Victor Mfg. Co. (S. C.)	115	115
Warren Mfg. Co. (S. C.)	95	102
Warren Mfg. Co. (S. C.) Pfd.	107	107
Washington Mills (Va.)	17	22
Washington Mills (Va.) Pfd.	93	96
Whitney Mfg. Co. (S. C.)	145	145
Wiscasset Mills (N. C.)	119	125
Woodruff Cotton Mills (S. C.)	107	110

Bankers' Conventions.

The annual convention of the South Carolina Bankers' Association was held at Greenville, S. C., May 10, 11 and 12. The following officers were elected for the ensuing year: W. J. Roddy of Rock Hill, president; W. D. Morgan of Georgetown, vice-president; Giles L. Wilson, secretary and treasurer; executive committee, D. D. McColl, Bennettsville; J. C. Self, Greenwood; L. C. Harrison, Yorkville.

At the annual meeting of the Mississippi Bankers' Convention, held at Meridian May 9 and 10, the following officers were elected: President, E. M. McMorris, Meridian; vice-president, J. M. Fletcher, Kosciusko; secretary and treasurer, G. W. Griffith, Vicksburg; executive committee, O. Newton, chairman, Brookhaven; E. N. Yates, Macon; S. J. High, Tupelo; W. G. Simpson, Meridian; R. C. King, Greenwood; vice-president first district, John T. Osborne, Corinth; vice-president second district, C. Fort, Holly Springs; vice-president third district, R. E. Wilburn, Lexington; vice-president

fourth district, W. S. Webster, Winona; vice-president fifth district, W. D. McRaren, Meridian; vice-president sixth district, D. L. Batson, Poplarville; vice-president seventh district, Woodson Atkinson, Summit; vice-president eighth district, Geo. F. Bauer, Yazoo City. Gulfport has been selected as the next meeting-place.

Characteristic of the South.

The official report of the condition of the First National Bank of Greenville, Miss., on April 6, 1906, is a splendid showing of the extent of deposits in Southern banks, its exhibit being typical of many such institutions. With a capital of only \$100,000, its individual deposits amount to very nearly \$1,000,000, the exact figures being \$992,226.23. The bank has a surplus of \$100,000 and net undivided profits of \$68,729. Its loans and discounts are \$728,044. The officers are W. H. Negus, president; J. T. Atterbury, vice-president; A. B. Nance, cashier, and T. W. McCoy, assistant cashier.

Bank Reports.

The Merchants and Farmers' Bank of Columbus, Miss., reports March 14, 1906, total resources, \$378,041; loans and discounts, \$195,699; capital stock paid in, \$65,000; undivided profits, \$17,467; total deposits, \$295,555. The growth of the bank is shown by its comparative statement of deposits, thus: March 14, 1903, \$46,544; March 14, 1904, \$198,243; March 14, 1905, \$221,713; March 14, 1906, \$295,555. J. M. Street is president; Joseph Donoghue, vice-president; E. C. Chapman, cashier, and Parker Reeves, assistant cashier.

New Corporations.

The Carolina Life Insurance Co. of High Point, N. C., has begun business.

A new bank is reported being organized at Comer, Ga., by W. A. Rowe, a local business man.

The Farmers and Merchants' Bank is to be established at Overton, Texas, by Otto S. Houston.

It is reported that a new bank is to be established at Attalla, Ala., with T. C. Banks as president.

It is reported that local business men are organizing a bank with \$15,000 capital at Reevesville, S. C.

The Fort Worth Life Insurance Co. of Fort Worth, Texas, recently approved, has been authorized to begin business with \$500,000 capital.

The Washington London Guaranty Investment Co. of Washington, D. C., has been incorporated in Delaware with \$500,000 capital.

The Camden National Bank of Camden, Ala., capital \$30,000, has organized with E. W. Berry, president; J. R. Liddell, vice-president, and John Miller, cashier.

The Enid National Bank of Enid, O. T., capital \$100,000, has been approved. The organizers are O. J. Fleming, S. T. Alton, M. Godshalk, M. M. Calloway and C. E. Mehew.

The American Mutual Life Insurance Co. of Rutledge, Ga., has begun business with E. C. Ponder as president and M. L. Wallace secretary, treasurer and general manager.

The First National Bank of Princeton, W. Va., has organized with \$50,000. The officers are C. R. McNutt, president; Wm. E. Fowler, vice-president, and J. Lee Harne, cashier.

The Konawa National Bank at Konawa, I. T., capital \$25,000, has organized with the following officers: C. B. Hyde, president; V. V. Harris, vice-president, and H. E. Fuller, cashier.

The Rabajo Company of Waco, Texas, for the purpose of accumulating and loaning money, has been incorporated with \$50,000 capital by J. T. Davis, Z. Hunt and George Clark.

The Bank of Commerce at Greenville, S. C., is reported to have begun business with Col. B. A. Morgan as president; Dr. J. Clarke Brawley, vice-president, and F. F. Martin, cashier.

The Bank of Allanreed at Allanreed, Texas, capital \$10,000, has been incorporated by S. B. Owens, J. R. P. Sewell, J. T. Davis, G. E. Castleberry, A. Andrews and J. A. Cappedge.

The Chickasha Mortgage Co. has been incorporated at Chickasha, I. T., with \$25,000 capital by E. A. Gomey, W. H. Gatterell, W. H. Harrison, H. W. Morgan and T. H. Ridgel.

The State Bank of Kennedy, Texas, has been incorporated with \$30,000 capital by J. A. Martin, J. W. Nichols, F. Hillje, M. A. Furber, William Green, Geo. Ray and Albert Rine.

The Union Savings Bank at Shawnee, O. T., capital \$25,000, is reported to have begun business with F. W. Christner, president; G. M. Christner, vice-president, and C. H. Nash, cashier.

The First State Bank of Jacksonville, Texas, has opened for business with the following officers: T. S. Hatton, president; John Howard, cashier, and Floyd Pinkard, assistant cashier.

The Americus National Bank of Americus, Ga., capital \$100,000, has been approved. The organizers are M. M. Lowery, J. M. Bell, J. R. Mercer, Cranford Wheatley and C. T. Lowery.

The Perpetual Building and Loan Association of Anderson, S. C., capital \$110,000, has been granted a commission. Those interested are R. E. Ligon, B. F. Mauldin and G. C. Sullivan.

The First National Bank of Tuttle, I. T., has been approved; capital \$25,000. The organizers are C. W. Baumbach, Ardmore, I. T.; C. H. Woodward, P. C. Dings, W. A. Ledbetter and S. D. Bledsoe.

The officers of the Home Building and Loan Association, recently chartered at Anderson, S. C., with \$100,000 capital, are G. N. C. Boleman, president, and J. R. Shelor, secretary and treasurer.

The First National Bank of Hewitt, I. T., capital \$25,000, has been approved. The organizers are C. W. Baumbach, Ardmore, I. T.; W. A. Ledbetter, S. D. Bledsoe, P. C. Dings and C. H. Woodward.

The Citizens' Trust and Savings Bank of Asheville, N. C., is reported to have begun business with \$60,000 capital. K. S. Ray is president; Edwin L. Ray, vice-president, and John A. Campbell, cashier.

It is reported that Dr. J. A. Abney will be president; A. A. Self of Kaufman, Texas, vice-president, and Fred S. Abney, assistant cashier of the Citizens' National Bank of Brownwood, Texas, recently approved.

The Beaumont Building and Loan Association of Beaumont, Texas, has filed articles of incorporation. The company will have \$150,000 capital, and among those interested are Guy W. Junker and S. G. Burnett.

The Citizens' National Bank of Houston, Texas, recently organized with \$250,000 capital, has been approved. The organizers are C. W. Shaw, W. C. Munn, D. C. Helberg, Andrew Dow and Edgar Watkins.

The Meadow Valley Bank of Rupert, W. Va., capital \$100,000, has been granted a charter. The incorporators are J. J. Echols, R. L. Telford, L. J. Williams, C. S. Dice and H. L. Van Sickler, all of Lewisburg.

The Mercantile National Bank of Brownwood, Texas, capital \$100,000, has

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been approved. The organizers are Felix Jackson, Brownwood, Texas; Ed. S. Hughes, D. T. Bomar, E. P. Bomar and D. B. Keeler.

The Blacksburg Building and Loan Association of Blacksburg, S. C., capital \$15,000, has been granted a commission. Those interested are W. J. Moorehead, T. S. R. Ward, W. E. Anderson, T. V. Mays, Charles Baber and M. H. Morrow.

[For Additional Financial News, See Pages 36 and 37.]

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